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1980 crop

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UNITED STATES DEPARTMENT OF AGRICULTURE

Science and Education Administration

Agricultural Research

Western Region and the Agricultural

Experiment Stations of the Western States

Quality Characteristics of Varieties and
New Selections of Wheats Bred and Grown in the
Western States 1/

Thirty-Third Annual Report

of the

Western Wheat Quality Laboratory

1980 Crop 2/

WRU No. 5802-20050-002

G. L. Rubenthaler, H. C. Jeffers, J. S. Kitterman, P. L. Finney,
A. D. Bettge, P. D. Anderson, M. L. Baldridge and P. A. Allen

January 1982

- 1/ In cooperation with the Arizona, California, Idaho, Montana, Oregon, Utah and Washington Agricultural Experiment Stations who developed and grew the experimental wheat selections studied.
- 2/ This is a Progress Report of cooperative investigations of the milling and baking characteristics of current commercial varieties and new selections of wheat grown in the Western states. Interpretation of the data may be changed with further experimentation; therefore, data in this report are not for publication, display, or distribution without prior written approval of the Science and Education Administration, Agricultural Research, USDA and the cooperating agencies concerned.

Thirty-Third Annual Report
of the
Western Wheat Quality Laboratory
1980 Crop

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Western Wheat Quality Laboratory
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SUMMARY OF ACCOMPLISHMENTS

1. Evaluation for end-use milling and baking quality of 1542 experimental wheat crosses grown and harvested as the 1980 crop were made. The selections were submitted from the wheat breeding programs in the Western States. Analysis and evaluation were completed on about 500 selections from the 1981 crop. Test criteria used to determine acceptability were flour yield, protein, ash and color; cookie diameter; loaf volume and crumb score; dough mixing requirements and water absorption; Japanese sponge cake volume and texture; Udon noodle yield, texture, color and score; and some developed test for Middle-Eastern style flat breads. Many of these experimental selections were judged as having acceptable end-use quality fitting their market classes. This work is an integral part of the wheat improvement programs to assure release of good agronomic and high quality wheat varieties. Results of the analysis can be found in the tables of data in Nursery Codes #1 through #64 and #1 Special. See the Index of Nurseries (page vi) for nursery titles, locations, and breeders.
2. In addition, the evaluation of milling and baking properties were made on 4,087 early generation selections from the wheat breeding programs that were grown in 1980. Studies included materials from snowmold, foot rot, dwarf smut, yield trial, and various crop management studies. Fourteen hundred seventy six (36%) of the experimental crosses were rated as having promise in overall quality characteristics. This material represents a new generation of experimental selections that are candidates for advancing and further testing to determine their desirability as possible commercial varieties. About 600 HRS and 1200 HRW and other crosses that were made to high protein sources were analyzed for protein and lysine. See Summary List of Early Generation Nurseries Evaluated on page 16. No data is included.
3. Alpha amylase analysis was made on 355 crosses selected for sprout resistance at Abredeen, ID. There was a wide variation in the amount of alpha amylase found within the material (.1 - 1.4 DU/g). Frequency distribution plots showed most of the material to be somewhere intermediate in enzyme activity, but sufficient samples on the low side promise encouragement for selecting for sprout resistance. No data is included in this report.
4. In co-operation with the PNW Grain and Quality Committee and U.S. Wheat Associates milling and baking evaluation were made on 18 commercial composites representing the wheat crop (1980) of WA, OR, ID, and MT. The data was used in their marketing brochures. See Nursery Code number 005 and 016.

5. Extensive studies were made to determine the effects of volcanic ash on end-use qualities of wheat. Results from treated and field samples revealed a significant loss in test weight occurred with only trace amounts of ash, most of the volcanic ash (90% or more) could be removed with conventional seed cleaning equipment, and no detrimental effects to baking properties occurred even at high levels. Results are partially included in Nursery Code 011 and 012.
6. A study of the effects of the fungicides Bayleton and Indar as a seed treatment using 12 spring varieties showed small improvements in test weight, flour yield, and milling score over untreated seed. The baking tests did not find any difference between the treated and untreated material. Studies were in co-operation with Pathologists crop loss investigations. See Nursery Codes 032, 040, 042, and 053.
7. Investigations relating the integrity of end-use quality factors through seven generations of seed production were followed using three varieties grown in triplicate at three locations. Analysis of variance showed no significant differences in milling and baking properties from the foundation generation through seven succeeding generations. Work was done in co-operation with WSU, Extension Agronomist, Dr. K. Morrison. See Nursery Code 064.
8. In co-operation with the Montana Wheat Quality Council we assisted in the pilot milling and baking evaluation of 23 hard red winter and spring samples. The samples were advanced selections from the Montana wheat breeding program, which were candidates for commercial variety release following industry evaluation. See Nursery Code 014 for results. Similarly we collaborated with the Hard Red Winter Wheat Quality Council by baking evaluation of 13 hard red winter wheats. For these results see Nursery Code 015.
9. As in past years the Laboratory conducted the Pacific Northwest Crop Improvement Association Collaborative Test, which is an industry wide effort to evaluate promising varietal selections for acceptable end-use quality. The project is partially funded by the Pacific Northwest Crop Improvement Association (dissolved and renamed Pacific Northwest Grain Council, June/81 Board of Directors Meeting). Eighteen samples were pilot milled and flour distributed to 12 collaborators of the domestic and foreign milling and baking industry. Results were summarized and distributed as the 10th Annual Report in October/81. See Nursery Codes 054 and 002 Special.
10. We Co-operated with U.S. Wheat Associates, USDA, Foreign Agricultural Service, General Sales Managers Office, and the Michigan Wheat industry by jointly with other ARS, Wheat Quality Laboratories (Wooster, OH and Manhattan, KS) to determine the usefulness of several million bushels of sprouted Michigan soft white wheat. Samples varied from 10-80% sprout damaged. End-use tests included cookies and 4 Middle-Eastern flat breads. Samples containing more than 10% sprout did not make satisfactory flat breads. See Nursery Code 055.

11. Eighty two spring wheat selections (along with the check variety Wampum) that were made to high protein sources at the Volcani Institute, Bet Dagan, Israel, were screened with a micro baking test for baking properties. The flour protein of the material ranged from 11 to 17%. Several of the group had soft endosperm, but like their sister selections were very promising in overall quality. Baking properties seemed unrelated to kernel texture. See Nursery Code 001 Special.

OTHER ACCOMPLISHMENTS (No data included in this report)

1. Studies begun in 1980 were completed in early 1981 which showed that both germinated and ungerminated whole garbanzo (*Cicer arietinum*) flour is equal to or superior to all previously studied legume supplements for replacing 5-20% wheat flour in sugar and sugar-free straight dough, U.S. type breads.
2. Designed and constructed a 4-drum automatic rinsing germination chamber to produce enough sprouted grains to accomplish both chemical and feeding studies.
3. Refined and standardized a procedure to assay for phytic acid phytate using the difference in phosphorous before and after precipitation with ferric chloride. Used that procedure to evaluate the effects of time and degree of germination of 12 wheat variety composites with respect to phytate and unbound phosphorous.
4. Also assayed same 12 wheat variety composites and germinated wheats for neutral detergent fiber (NDF) and alpha amylase (Matheson-Pomeranz method with D & S Instrument), and summarized previous data on some 12 wheats and malts which was presented at the 1981 AACC annual meeting Oct. 25-29, Denver, CO.
5. An eighty volume 2 x 2 slide set illustrating the simplicity of the ingredients, dough preparation, and methods of baking 5 popular Middle-Eastern flat breads was made at the request of the PNW Wheat Commissions. The Commissions have made duplicates and will have the slide sets available to schools, classes and homemakers interested in trying these breads from locally grown wheat.
6. Laboratory scale methods were developed to evaluate soft wheats for several flat breads. The work was led by Dr. Hamed Faridi, a Visiting Scientist from Iran and supported by the three PNW Wheat Commissions. Significant improvements were made to standardize the tests to give reproducible results e.g. designing a molder and modifying a ceramics kiln for a high temperature bake oven. See the publications list on page 12 for some of these results.

INDEX OF NURSERIES

NURS CODE	NURS ID	NURSERY NAME	LOCATION	BREED	NOSAM	BLABNO	SDATE	BRCO	COCO	CACO	NOCO	PBAR
001		ADVANCED SNOWMOLD	LIND, WN	G.W. BRUEHL	10	800001	80219	1	1	0	0	9
002		ADVANCED WHITE WINTER	MORO, OR	C.R. ROHDE	18	800011	80221	0	1	0	0	10
003		ADVANCED WHITE WINTER	PENDLETON, OR	C.R. ROHDE	18	800029	80221	0	1	0	0	6
004		INCREASE SWS SELECTIONS	ROYAL SLOPE, WN	C.F. KONZAK	88	800047	80242	0	1	0	0	8
005		PNW GRAIN STD'S & QUALITY	ID, OR, MT, AND WA		18	800135	80248	1	1	1	1	9
006		SEPTORIA T. - RESISTANT LINES	DAVIS, CA	D.G. GILCHRIST	12	800153	80228	1	1	0	0	10
007		PRELIMINARY IRRG. WINTER	PENDLETON, OR	C.R. ROHDE	23	800165	80261	0	1	0	0	10
008		ADVANCED IRRG. WHITE WINTER	PENDLETON, OR	C.R. ROHDE	29	800188	80261	0	1	1	1	10
009		PRELIMINARY WINTER	MORO, OR	C.R. ROHDE	25	800217	80261	0	1	0	0	9
010		JACQUOT S CLUBS	HOOPER, WA	H. JACQUOT	15	800242	80268	0	1	1	1	7
011		VOLCANIC ASH STUDY	FARM CITES-WA		19	800257	80268	1	1	1	1	8
012		VOLCANIC ASH STUDY - CONT'D	FARM CITES-WA		6	800276	80268	1	1	1	1	10
013		PRELIMINARY NON-IRRIG WHITE WINTER	PENDLETON, OR	C.R. ROHDE	23	800282	80282	0	1	0	0	6
014		MONTANA WHEAT QUALITY COUNCIL	SD, HV, MC, BZ, MT	H. MC NEAL	23	800305	80282	1	0	0	0	12
015		HARD WINTER WHEAT QUAL COUNCIL	MANHATTAN, KS		13	800328	80294	1	0	0	0	12
016		PNW GRAIN STD'S & QUALITY - CONT'D	MT		3	800341	80301	1	0	0	0	11
017		STATE HARD RED WINTER	LIND, WA	E. DONALDSON	14	800344	80318	1	0	0	0	10
018		ADVANCED HARD RED WINTER II	LIND, WA	E. DONALDSON	16	800358	80318	1	0	0	0	10
019		ADVANCED HARD RED WINTER I	LIND, WA	E. DONALDSON	24	800374	80318	1	0	0	0	10
020		STATE WHITE WINTER	LIND, WA	E. DONALDSON	11	800398	80318	1	0	0	0	8
021		MORO HARD RED WINTER	MORO, OR	F.A. CHOLICK	11	800409	80322	1	0	0	0	9
022		HYSLOP SOFT WHITE ADVANCED	CORVALLIS, OR	W.E. KRONSTAD	15	800420	80322	0	1	1	1	8
023		HYSLOP SOFT WHITE ELITE	CORVALLIS, OR	W.E. KRONSTAD	18	800435	80322	0	1	1	1	10
024		HYSLOP HARD RED ELITE	CORVALLIS, OR	F.A. CHOLICK	11	800453	80322	1	0	0	0	8
025		MORO SOFT WHITE ELITE	MORO, OR	W.E. KRONSTAD	19	800464	80322	0	1	1	1	9
026		MORO HARD RED ADVANCED	MORO, OR	F.A. CHOLICK	14	800483	80322	1	0	0	0	7
027		MORO SOFT WHITE ADVANCED	MORO, OR	W.E. KRONSTAD	21	800497	80322	0	1	1	1	10
028		HYSLOP HARD RED WINTER	CORVALLIS, OR	F.A. CHOLICK	22	800518	80322	1	0	0	0	10
029		WESTERN REGIONAL HARD RED WINTER	PENDLTN, MORO, & LIND		28	800540	80324	1	0	0	0	10
030		WESTERN REGIONAL WHITE WINTER	PENDLTN, KALISL, & POMY		23	800568	80324	0	1	1	1	7
031		WESTERN REGIONAL SPRING'S	KALISL, R.S., & TWIN F		37	800591	80324	1	0	0	0	10
032		FUNGICIDE STUDY	PULLMAN, WA	R. LINE	38	800628	80325	0	1	0	0	10
033		PRELIMINARY SOFT WHITE SPRING	PULLMAN, WA	C.F. KONZAK	73	800666	80325	0	1	0	0	9
034		PRELIMINARY SOFT WHITE SPRING	PULLMAN, WA	C.F. KONZAK	14	800739	80336	0	1	0	0	9
035		DUAL PURPOSE LINES EXP #20 (DRY EARLY)	PULLMAN, WA	C.F. KONZAK	23	800753	80336	1	1	0	0	8
036		DUAL PURPOSE LINES EXP #20 (DRY EARLY)	LIND, WA	C.F. KONZAK	23	800776	80336	1	1	0	0	10
037		DUAL PURPOSE LINES EXP #20	ROYAL SLOPE, WA	C.F. KONZAK	23	800799	80336	1	1	0	0	9
038		ADVANCED SOFT WHITE SPRING EXP 71	PULLMAN, WA	C.F. KONZAK	6	800822	80336	0	1	0	0	9
039		STATE SOFT WHITE SPRING EXP #52	PULLMAN, WA	C.F. KONZAK	19	800828	80336	0	1	0	0	9
040		CROP LOSS (BAYLETON + INDAR) SPRING WHT	SOILS FARM PULLMAN, W	R.F. LINE	24	800847	80344	0	1	0	0	9
041		QUALITY COMPARISON X LOCATION	L.P. W, D, H, W, RS, C, WA	C.F. KONZAK	27	800871	80344	0	1	0	0	9
042		CROP LOSS (BAYLETON + INDAR) WINTER WHT	SOILS FARM PULLMAN, W	R.F. LINE	24	800898	80344	0	1	0	0	10
043		ADVANCED SPRING	PENDLETON, OR	C.R. ROHDE	20	800922	80351	1	1	0	0	9
044		ADVANCED SPRING	MORO, OR	C.R. ROHDE	20	800942	80351	1	1	0	0	10
045		ADVANCED IRRIGATED SPRING	PENDLETON, OR	C.R. ROHDE	25	800962	80351	1	1	0	0	11
046		HIGH PROTEIN #17 & 18	ROYAL SLOPE, WA	C.F. KONZAK	15	800987	81008	1	0	0	0	12
047		HIGH PROTEIN #80 & 90	LIND, WA	C.F. KONZAK	16	801002	81008	1	0	0	0	12
048		STATE HARD RED SPRING	ROYAL SLOPE, WA	C.F. KONZAK	22	801018	81008	1	0	0	0	10
049		ADVANCED HARD RED SPRING	ROYAL SLOPE, WA	C.F. KONZAK	35	801040	81008	1	0	0	0	10
050		HARD RED SPRING #87	LIND, WA	C.F. KONZAK	7	801075	81008	1	0	0	0	10

NURS CODE	NURS ID	NURSERY NAME	LOCATION	BREED	NOSAM	BLABNO	SDATE	BRCO	COCO	CACO	NOCO	PBAR
051		CROP LOSS (BAYLETON + INDAR) SPRING WHT	SPILLMAN, PULLMAN, WA	R. LINE	24	801082	81008	1	1	0	0	9
052		WA 6753 AND ID 185 COMPARISONS	L, RS, D, PY, & WW, WA	C.F. KONZAK	12	801106	81020	0	1	0	0	9
053		CROP LOSS (BAYLETON) WINTER WHEAT	OBS HILL, PULLMAN, WA	R. LINE	24	801118	80020	0	1	0	0	8
054		PNWCIA COLLABRATIVE TESTS	PULLMAN & LIND, WA	.	18	801142	81051	1	1	1	1	10
055		MICHIGAN SPROUT STUDY	MICH COMM. LOTS	.	15	801160	81054	1	1	0	0	9
056		CALIFORNIA REGIONAL CEREAL TESTS	UCD, KINGS&SUTTER CO.	C.O. QUALSET	48	801175	81058	1	1	0	0	10
057		BREAD TYPE WHITE WHEATS	PULLMAN, WA	R.E. ALLAN	6	801223	81091	1	0	0	0	7
058		PURE SEED NURSERY (BURT DERIVATIVES)	PULLMAN, WA	R.E. ALLAN	13	801229	81091	1	1	0	0	9
059		DRILL STRIPS	PULLMAN & LIND, WA	.	52	801242	81092	1	1	1	1	10
060		WESTERN FACULTATIVE	LIND, WA (IRRIG)	C.F. KONZAK	8	801294	80324	1	0	0	0	10
061		INCREASES (1979) OF ADVANCED SELECTIONS	FRANKLIN CO., ID	W. POPE	33	801302	81096	1	1	0	0	13
062		SIEVING STUDY	MOSCOW, ID	W. POPE	18	801335	81096	1	1	0	0	10
063		AUSTRALIAN SAMPLE	FAR EAST	.	1	801353	81173	1	1	1	1	9
064		SEED GENERATION TRIALS	PL, WW, & POM, WA	K. MORRISON	189	801354	80197	0	1	0	0	8

KEY : NOSAM = NUMBER OF SAMPLES BLABNO = BEGINNING LAB NUMBER SDATE = DATE SAMPLES RECEIVED

BRCO = BREAD CODE COCO = COOKIE CODE CACO = CAKE CODE NOCO = NOODLE CODE PBAR = NURSERY MEAN PROTEIN

SPECIAL

001	Israeli High Protein Selections	Bet Dagan, Israel	C.F. Konzak	83	1	Mar/81	1	0	0	0	0
002	10th Annual Report										
	Pacific Northwest Grain Council										
	Collaborators Tests	WA and ID		18	42	Oct/81	1	1	1	1	1

ABBREVIATION DESCRIPTION

We have implemented a computer program to store, calculate, and retrieve our milling and baking data. The following is a list of abbreviations used as column headings in the following tables of data.

NURSCO - Nursery Code Number (located upper left corner of table).
 LABNUM - Laboratory Number (first two digits crop year).
 VAR - Variety or selection name.
 IDNO - CI or Selection Identification Number.
 TWT - Test weight in lbs/bu.
 FASH - Flour ash percent at 14% moisture basis.
 FYELD - Percent of flour obtained.
 MSCOR - Milling score.
 FPROT - Flour protein percent at 14% moisture basis.
 FABSC - Farinograph water absorption corrected to 14% moisture basis.
 FPEAK - Farinograph mixing peak time in minutes.
 FSTAB - Farinograph stability in minutes.
 BABS - Bake water absorption at 14% moisture basis.
 BABSC - Bake absorption corrected to mean protein of nursery.
 MTIME - Optimum mixing time in minutes.
 LVOL - Bread loaf volume observed in cc's.
 LVOLC - Bread loaf volume (cc) corrected for protein to the mean protein of the nursery. (See table 1 or 2, page ix)
 BCRGR - Bread crumb grain rating code. (See table 3, page x)

CODE	MEANING
1	Excellent (S*)
2	Satisfactory (S)
3	(Q-S)
4	Questionable-Satisfactory (Q-S)
5	(Q- S)
6	Questionable (Q)
7	(Q- Q)
8	Questionable-Unsatisfactory (Q-U)
9	Unsatisfactory (U)

CODI - Cookie diameter in cm's.
 CODIC - Cookie diameter (cm) corrected for protein to the mean protein of the nursery. (See table 1 or 2, page ix)
 VISC - Brookfield viscosity (observed)
 VISCC - Brookfield viscosity corrected for protein to the mean protein of the nursery.
 CAVOL - Japanese Sponge Cake Volume in cc's.
 SCSCOR - Sponge cake score (scale 1-100)
 WTIN - Noodle weight increase (percent).
 NYELD - Noodle yield.
 NOSCORE - Noodle score (1-100)
 MABS - Mixograph absorption at 14% moisture (%).
 MABSC - Mixograph absorption corrected for protein (%).
 MTYPE - Mixograph Type - From Mixograph Reference Chart.

RATE - Overall Rating when used see table 3.
 RMKS - Remarks.

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INTERPRETATION OF DATA

As in the past reports, decisions were based on the results of the tests after adjustment to an average protein content of the nursery using correction factors derived from several years of data on particular varieties and/or classes of wheat. These correction factors and scale for ranking codes can be found in the following tables 1-3.

CORRECTION FACTORS - TABLE 1

VTN	VARIETY	(VC) LOAF VOLUME	(CC) COOKIE
1	Anza	61	0
2	Burt	51	.078
3	Coulee	76	.070
4	Fortuna	64	0
5	Gaines	38	.136
6	Hyslop	0	.137
7	Inia 66	68	0
8	Itana	60	0
9	Kharkof	57	0
10	Luke	0	.085
11	Marfed	61	.098
12	McCall	52	0
13	McDermid	0	.106
14	Moro	0	.094
15	Nugaines	62	.118
16	Omar	0	.083
17	Paha	0	.037
18	Sprague	0	.062
19	Springfield	0	.042
20	Twin	0	.149
21	Yamhill	0	.124
22	Wanser	69	0
23	Wared	62	0

Variety name (VAR) not found or where the value is zero in Table 1, use correction factor for class of sample in Table 2.

VTN = Computer system variety number

CORRECTION FACTORS - TABLE 2

CLASS	(VC) LOAF VOLUME	(CC) COOKIE
SWW	60	.110
SWS	60	.110
CLUB	55	.071
HRW	62	.080
HRS	62	.080
HWW	62	.080
HWS	62	.080

RANKING AND RATING CODES - TABLE 3

CODE BREAD CRUMB GRAIN	MEANING
1	Excellent (S*)
2	Satisfactory (S)
3	(Ø-S)
4	Questionable-Satisfactory (Q-S)
5	(Q-Ø)
6	Questionable (Q)
7	(Q-Ø)
8	Questionable-Unsatisfactory (Q-U)
9	Unsatisfactory (U)

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INTRODUCTION

This is the Thirty-Third Annual Report of the Western Wheat Quality Laboratory of cooperative investigations with breeder, geneticists, and pathologists in the seven Western States to evaluate the milling and baking quality characteristics of experimental wheat selections grown and harvested as the 1980 crop. These investigations included several market classes and sub-classes of wheat which are commercially grown in the Pacific Northwest and the Western Region and relates to their quality for commercial production and consumer acceptance. These studies deal with the physical-chemical flour properties associated with a wheat's suitability for commercial pastry and bread products.

The nurseries have been arranged in nurseries (Nursery Index in Table of Contents) and the varieties and selections are listed in the tables in order of their assigned Laboratory Number. Mixograms were run on all samples evaluated, but none were reproduced for inclusion in this report. Alternately, each mixogram was characterized by type as described in the Methods Section.

- 1/ Research Food Technologist, Research Food Technologist, Research Food Technologist, Research Food Technologist, Physical Science Technician, Physical Science Technician, Biological Technician and Clerk-Typist, respectively, U.S. Department of Agriculture, Science and Education Administration, Agricultural Research, Western Region, assigned to the Western Wheat Quality Laboratory, Wheat Breeding and Production Unit, Pullman, Washington.
- 2/ Credit is due Garrison King, Washington State University Laboratory Technician II for the flour milling and physical-chemical determinations made on early generation material. This work was supported by grant funds from the Washington Wheat Commission.

Credit is due Hamed A. Faridi, Visiting Scientist for leadership, assistance and knowledge shared on Middle-Eastern and North African flat bread requirements and methods for testing. His work was supported by a grant from the Washington, Oregon and Idaho Wheat Commissions.

METHODS USED BY USDA, WESTERN WHEAT QUALITY LABORATORY

All wheat samples were fumigated when received with 800 cc of methyl bromide/50 gal. drum overnight and then aerated, cleaned, scoured, test weight (1, Method 84-10) determined, sub-sampled for approximate analysis, and placed in the storeroom until experimentally milled by the following methods:

Buhler Milling: All of the 1979 samples of Advanced and Regional Nurseries were milled on a Buhler, pneumatic, laboratory mill. The samples were tempered to a predetermined moisture content ranging from 14.0% to 16.0%, depending on the hardness and the known flour-bolting properties. The harder wheats require the most water. Thus, the grain was conditioned so that the most rapid and most complete separation of endosperm could be made. The temper water contained a wetting agent (.1% Aerosol OT) to hasten moisture penetration and the tempered wheat was allowed to rest for 16-24 hours before milling to permit uniform distribution of the moisture. An additional 0.5% water was added 15-20 minutes prior to milling. The Buhler experimental mill schematic flow is shown in Figure 1.

All six flour streams were combined to make a straight-grade flour. The first and second break and first and second reduction streams were combined for a patent flour. All straight-grade flour was rebolted on a 120 stainless steel wire screen and blended thoroughly.

Flour Yield: The percent of the total products recovered as straight-grade white flour.

Milling Time: The minutes required to mill a 2000-gram sample with the Buhler experimental mill and obtain a normal separation of bran, shorts, and flour. Time is determined by visual observations and adjustments by an experienced miller.

Milling Score: Calculated as follows:

$$100 - [(80 - \text{flour yield}) + 50 (\text{Flour ash} - .30) + .48 (\text{Milling time} - 15) + .5 (65 - \% \text{ long patent}) + .5 (16 - \text{1st tempering moisture})]$$

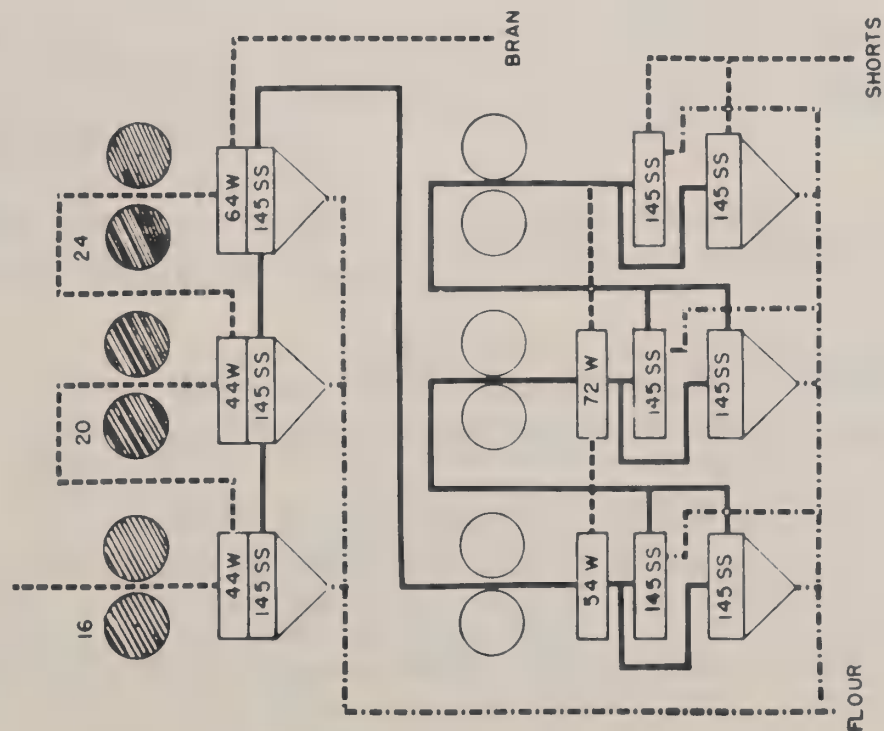
Modified Quadurmat Milling Method: The preliminary nurseries were experimentally milled on Modified Quadurmat system (500g). The procedure was described in the 27th Annual Report, Oct. 1976 (pages 1-14). Conversion of the data to give a predicted Buhler flour yield and milling score was done with the following linear equations:

<u>Flour Yield</u>	<u>Milling Score</u>
Soft wheat ($y = 14.0671 + .83474X$)	Soft wheat ($y = -21.60185 + 1.27367X$)
Hard wheat ($y = 13.4166 + .83298X$)	Hard wheat ($y = -3.43818 + 1.0448X$)

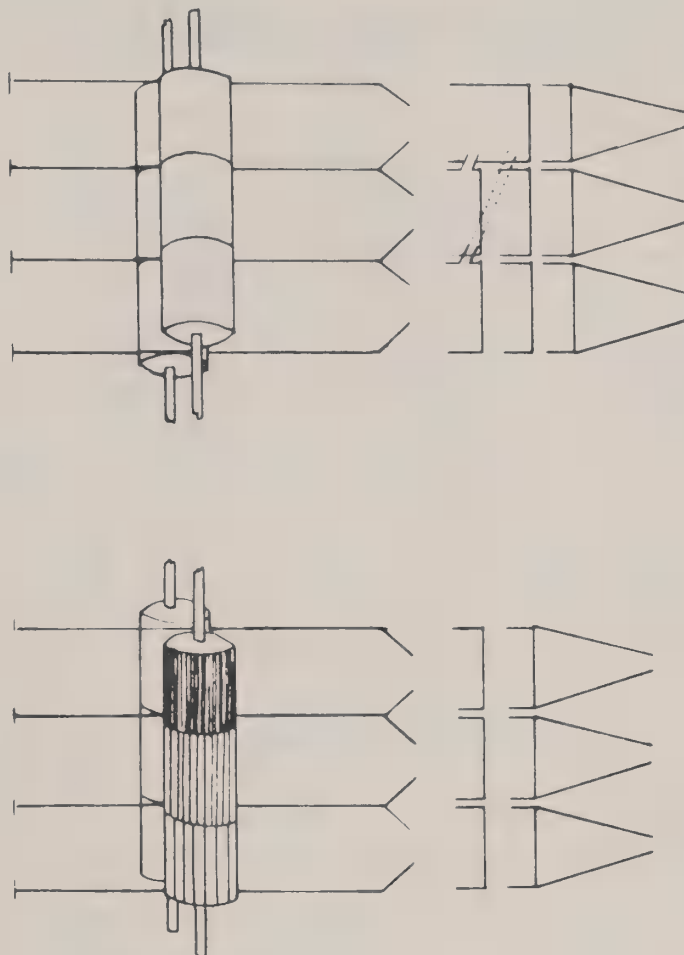
The Modified Procedure is schematically shown in Figure 2. Modifications include those described by Jeffers and Rubenthaler (11).

BUHLER EXPERIMENTAL MILL

Clean Tempered
Wheat



DIAMETER - 6 INCHES
ROLLS: DIFFERENTIAL - 2 TO 1
SURFACE - 300 SQUARE INCHES
BOLTING SURFACE - 288 SQUARE INCHES

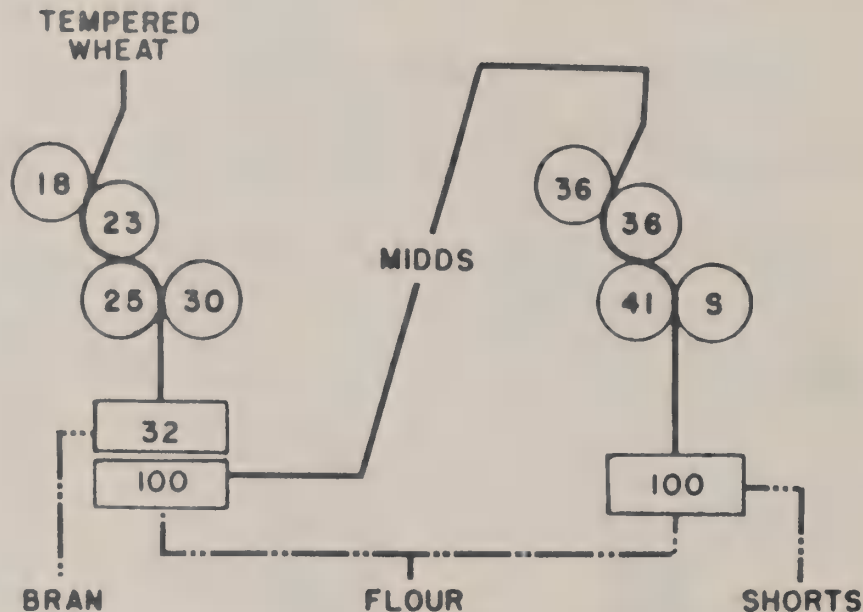


WHEAT TYPE	FEED RATE (G./MIN.)	FLOUR YIELD (%) ^a	FLOUR ASH (%) ^b
WHITE CLUB	145 - 160	73 - 75	0.39 - 0.41
HARD RED WINTER	115 - 130	68 - 73	.35 - .42
COMMON (SOFT) WHITE	90 - 120	67 - 72	.35 - .43

^a BASIS TOTAL PRODUCTS RECOVERED FROM MILL
^b ASH CONTENT OF STRAIGHT-GRADE FLOUR

Figure 1. Schematic flow of the Buhler experimental mill showing a range of the average feed rates, flour yields, and flour ash of the various classes of wheat. Roll settings are varied for optimum clean-up and reduction of the stock, and feed rates according to the bolting and reduction properties.

MODIFIED QUADRUMAT SR. MILLING PROCEDURE



BREAK UNIT

BRABENDER QUADRUMAT JR. WITH
QUADRUMAT SR BREAK ROLLS

REDUCTION UNIT

BRABENDER QUADRUMAT SR.
REDUCTION HEAD

ROLLS:

DIAMETERS: 2.8 INCHES

SPEED:

FAST ROLLS: 1200 RPM

SLOW ROLLS: 560 RPM

DIFFERENTIAL: 2.14 TO 1

TEMPER:

TO 15% FOR 24 HOURS WITH
WETTING AGENT

SIFTERS: 8 INCH TYLER TESTING
SIEVES ON ZELENY SEDIMENTATION
SIEVE SHAKERS

SIFTING SCHEDULE:

BREAK STOCK:

BRAN: REMOVED AFTER 1 MIN.

MIDDLINGS: REMOVED AFTER AN
ADDITIONAL 2 MIN. (3 MIN. TOTAL)

REDUCTION STOCK: 3 MIN.

SAMPLE SIZE: 100-250 GRAMS TEMPERED WHEAT
(HELD CONSTANT WITHIN EACH COMPARISON GROUP)

OUTPUT: 5-7 SAMPLES PER HOUR

Figure 2. Semi micro experimental mill flow with the roll corrugations per inch. The break rolls have corrugation spirals of 1.25, 1.75, 1.88, and 1.25 inch/ft. in progressive order, and the middling reduction roll spirals are 1.25, 1.25, 1.25, and frosted smooth. Roll spacings for first, second and third break are 0.035, 0.0035, and 0.002 inch respectively. The middling rolls are set at 0.0015, 0.0020 and 0.0015 inch respectively.

Semi Micro Flour Quality:* Wheats milled on the semi-micro mill which gave satisfactory flour yields were evaluated by the following tests and all others with unsatisfactory milling properties were discarded: NIR protein, mixograph (3, 9), and AWRC test (14,17) to distinguish whether they fit the sub-class of club or soft common and/or hard wheats.

Micro Milling of Single Plant Selections:* The 5-10 gm samples of grain were accurately weighed, placed in vials, and water added to bring them to 14% moisture. The tempered grain was milled on the micro mill which consists of two pairs of corrugated rolls and double sifters with 38- and 135-mesh stainless steel screens. The bran over the 38-mesh sifters was evaluated for milling properties by visual examination for the degree of bran clean-up. The throughs of the 135-mesh stainless steel screen, of those samples considered to be good milling types, were examined for flour quality by means of the Modified Micro Sedimentation Method (12). Protein and lysine are determined on these materials by NIR analysis (16). A schematic flow diagram of the micro mill is shown in Figure 3 (2, 13).

Moisture Content of Wheat & Flour: These values have not been given in these reports, but the methods are as follows: The reference test is two grams of ground wheat in an aluminum moisture dish are heated in a forced draft oven for 40 minutes at 140° C., allowed to cool in a desiccator and weighed. Flour Moisture is determined in the same manner except that it is heated only 20 minutes. The NIR (Technicon 400) is routinely used as calibrated to the above method.

Ash of Wheat and of Flour: The ash from a 4-gram sample of wheat meal or flour heated for 15 hours at 550° C. in a muffle furnace. (1, Method 08-01).

Protein of Wheat and Flour: The protein content of the samples was determined by the NIR method, and checked (about 10% of the material) by the Kjeldahl method (1, Method 46-12).

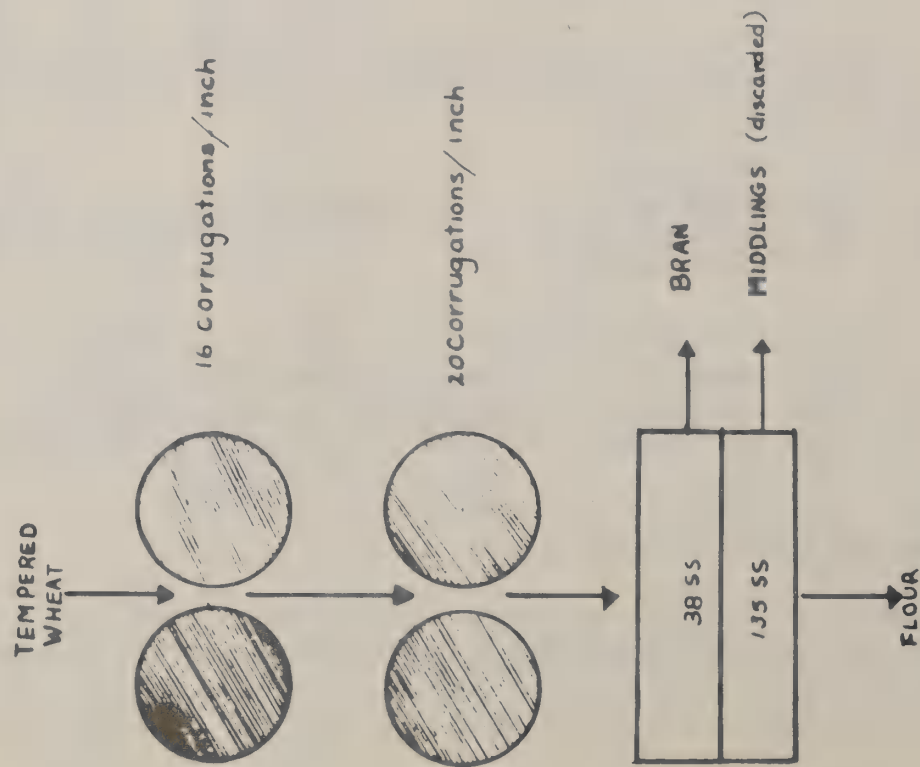
Alkaline Water Retention Capacity (AWRC): The percent increase in weight of 7.5 g flour due to absorption of water from 35 ml of .1 normal NaHCO_3 solution (17).

Viscosity: Dial reading x 7.5 of a RVT Brookfield Synchro-Lectric Viscometer fitted with a No. 2 spindle at 50 R.P.M. using a suspension of 20 grams of flour in 100 ml of water and 7 ml of 1 N lactic acid (15).

Mixogram: Used to characterized new selections as to market class and estimate baking properties. The recently developed 10 gm instruments were used and the testing procedure and interpretation of K.F. Finney(9) was followed. To reduce the time and expense involved in reproducing the mixograms a reference chart was developed to characterize each curve as to type ranging from very weak to exceptionally long and strong types. The chart and instructions for its use are found on pages 7 and 8.

*Supported by special grant of funds from the Washington Department of Agriculture and the Washington Wheat Commission to permit extensive early generation (F_3 - F_4) testing.

MICRO-MILL FLOW



ROLL SPACING 18 .012 INCH
28 .0025 "

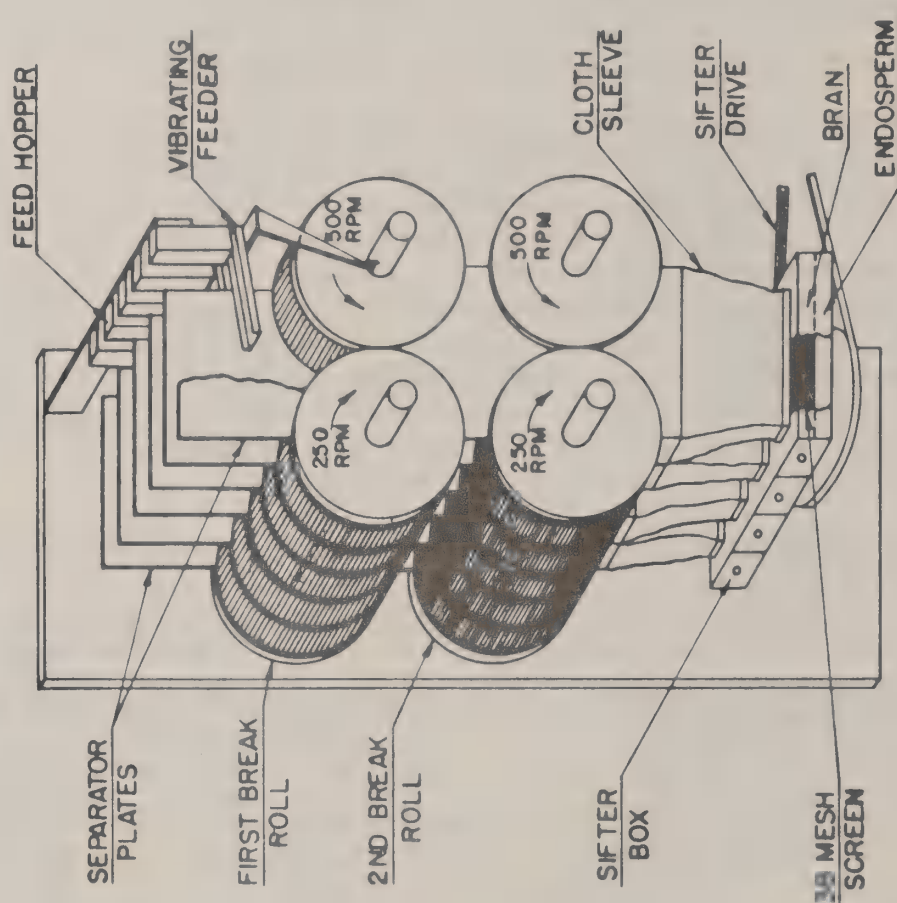


Figure 3. Schematic and flow of the micro experimental mill. Four samples are milled and sifted simultaneously and feed rate is held constant by a vibratory feeder.

USE OF MIXOGRAM REFERENCE CHART

In addition to determining mixing time for optimum dough development by observation during baking test, mixing time and mixing tolerance, two important baking properties of wheat flour, can be determined independently from a mixogram. A mixogram is determined with 10g of flour and appropriate amount of water to give optimum absorption. It is really nothing more than a recording mixer reflecting the resistance the dough has to be mixed over a period of time. Most mixograms are run either 7 or 8 minutes which is sufficient time for most flours to give a full picture of their mixing time and to show what happens when mixing continues beyond this point (mixing peak) as reflected in the tail of the curve and commonly referred to as tolerance.

Final evaluation must be made with consideration given to the protein content of the flour, because of the effect protein content has on the mixing characteristics within the same variety. As protein increases, mixing time will decrease with an apparent increase of tolerance. To illustrate this, compare #1 high(H) with #2 medium (M) and #3 low (L) which are typical mixograms of the club wheat Paha at 12, 9, and 6% protein respectively. Similarly, 2H, 3M, and 4L are typical for Nugaines at these protein levels. Little change can be observed on any wheat above 13.0 or below 7.5% protein.

This chart will be used to identify the curve characteristics which most closely fit the sample and will be reported as numbers 1L, 1M, 1H, etc. through 8H.

MIXOGRAM REFERENCE CHART

LOW

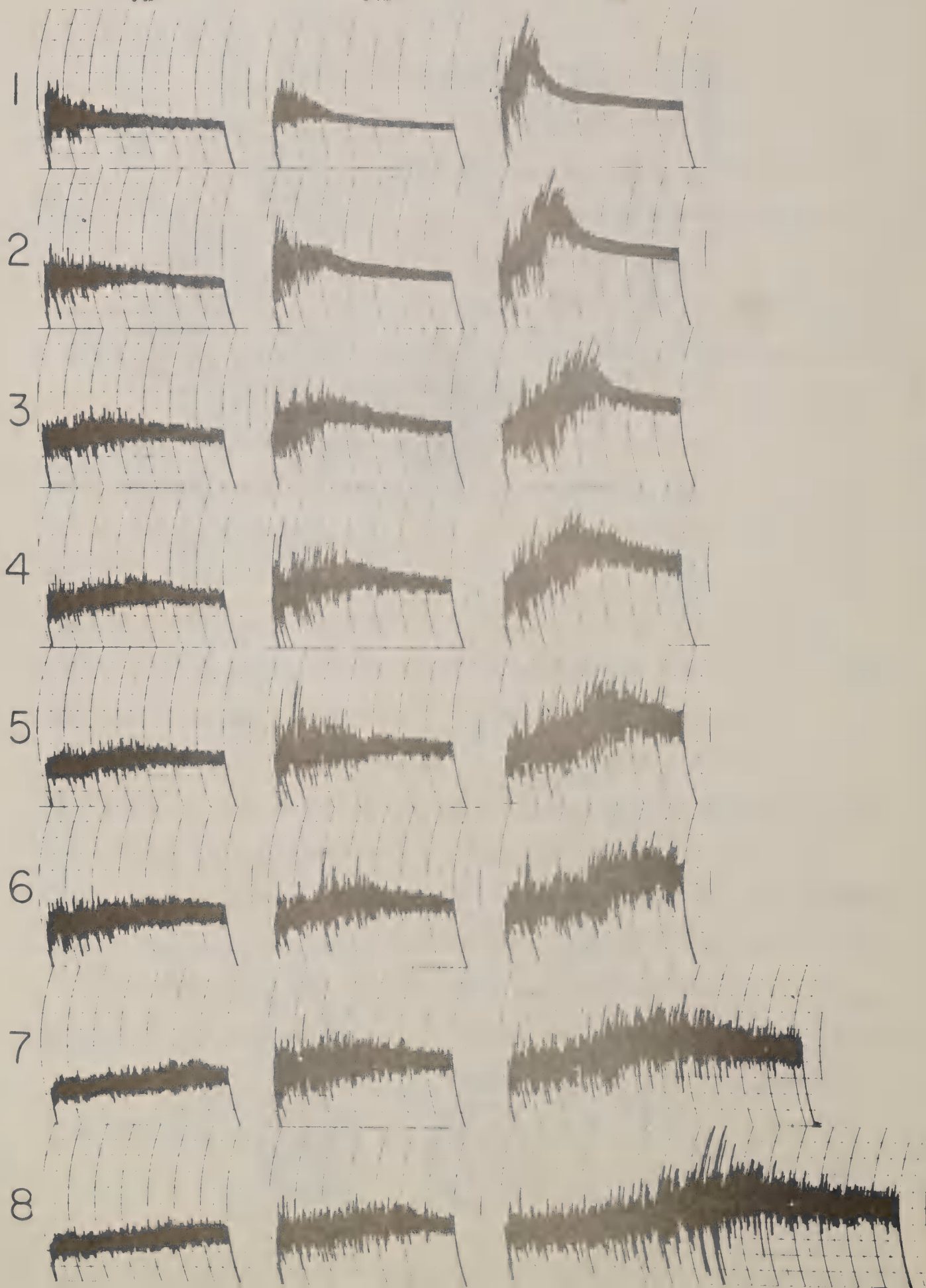
6-9%

MEDIUM

9-11%

HIGH

11-13%



Cookie Baking: 40 g of flour, micro method, using 25% absorption, 60% sugar, 30% emulsified shortening, 3% dry skim milk, 1% NH_4HCO_3 , 1% NaCl, 1% NaHCO_3 , was employed (8).

Cookie Diameter is the average diameter, in centimeters, of cookies baked on two separate days.

Farinograph: The Farinograph was equipped with a 50-g bowl and the Constant Flour Weight Procedure was employed (1, Method 54-21A).

Farinograph Absorption is the amount of water required to center the highest portion of the Farinograph curve on the 500 unit line.

Peak or Farinograph Mixing Time is the time interval, in minutes, from the first addition of water until the tip of the curve reaches its maximum height.

Stability of Period of Resistance is the number of minutes the top of curve remains above the 500 unit line when the highest portion (peak) is centered on the 500 unit line.

Bread Baking: An optimum absorption, optimum mixing, optimum bromate, 100 g flour and straight dough method using 7.2% yeast, 1 1/2% salt, 6% sugar, 1/4% malt extract, 4% dry milk solids, 65 ppm ascorbic acid, and 3% hydrogenated shortening was employed (5,6,7,10).

Baking Absorption: The amount of water required to make a dough of proper consistency for bread baking when mixed to optimum conditions as judged by an experienced baker using the baking method described above (4).

Mixing Time: Time in minutes required to mix the flour and the other bread dough constituents to the optimum condition as judged by an experienced baker (5).

Optimum Bromate: The amount of potassium bromate required to produce the optimum break, shred, crust, and grain characteristics of the loaf of bread (5).

Flour Color: The slurry method using 20 g of flour, 25 ml of water, stirred for 2 minutes with a glass stirring rod fitted with a 11mm policeman, and allowed to stand for 5 minutes. Reading is taken on an Agtron (F_2) calibrated with standard color discs #63 = 0 and #85 = 100.

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(Jan. 1 - Dec. 31/81)

- Rubenthaler, G.L. and Faridi, H.A. 1981 Note on a Laboratory Dough Molder for Flat-Breads. Cereal Chemistry 58:6.
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- Faridi, H.A., Finney, P.L. and Rubenthaler, G.L. 1981 Microbaking Evaluation of Some U.S. Classes for Suitability in North African Breads. Cereal Foods World 26(9):496 (ABSTRACT).
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Rubenthaler, G.L., Jeffers, H.C., Kitterman, J.S., Anderson, P.D., Bettge, A.D., Finney, P.L., Baldrige, M.L. and Allen, P.A. Quality Characteristics of Varieties and new selections of wheat bred and grown in the Western states, for the crop year 1979. USDA-SEA Mimeographed Publication WRU 5802-20050-002, RPA 405, January 1981.

Faridi, H.A., Rubenthaler, G.L. and Finney, P.L. Quality Evaluation of Pacific Northwest Soft White Wheats for Suitability as Middle Eastern and North African Breads. WSU Field Days, June 1981.

INVITED TECHNICAL PRESENTATIONS

Rubenthaler, G.L., 1981

Lectured (2 hrs.) to Laboratory Analysis Class, Dept. of Animal Science, WSU, on "Protein analysis of grain". January 22.

Gave a short course (4 hrs.) on "Milling and uses of soft white wheat", to foreign millers, International Grains Program, Kansas State University, Manhattan, KS. February 11.

Presented a talk "An overview of research relevant to the baking industry" at the American Bakers Association Technical Liaison Committee with the USDA, at the WRRC, Albany, CA. February 19.

Lectured (1 hr.) to Biometrics class, College of Agriculture, WSU on "Application of Statistics in Laboratory Analysis". April 3.

Lectured (3 hrs.) to Cereal Processing class, Food Science and Technology Dept., WSU on "Wheat flour milling". April 15, 20, and 22.

Lectured (1 hr.) to Food Processing class, Food Science and Technology Dept., WSU, on "Physical and chemical testing of wheat flour". May 5.

Presented a talk on "Effects of volcanic ash on milling and baking quality", Milling and Baking Division of American Association of Cereal Chemists Meeting, Salt Lake, UT. May 15.

Presented a talk on "Varietal changes and end-use quality" at Pacific Northwest Crop Improvement Association Annual meeting, Pendleton, OR. June 23.

Presented talk on "Discussions on Wheat Quality" at the Western Wheat Workers Meeting, Corvallis, OR. July 16.

Gave Seminar "Function of the Western Wheat Quality Laboratory in Variety Development" to the Korean Milling Team, Pullman, WA. July 28.

INVITED TECHNICAL PRESENTATIONS
(con't)

Gave Seminar "Function of the Western Wheat Quality Laboratory in Variety Development" to the Japanese Food Agency Team, Pullman, WA. Aug. 17.

Gave Seminar "Function of the Western Wheat Quality Laboratory in Variety Development" to the Taiwan Milling Team, Pullman, WA. Sept. 18.

Presented short course (4 hrs.) on "Milling and End-use Quality of Soft White Wheat" to the Foreign Millers, International Grains Program, Kansas State University, Manhattan, KS. Sept. 29.

Jeffers, H.C., 1981

"Role of the Western Wheat Quality Laboratory", South American Milling Team, Pullman, WA. July 17.

Finney, P.L., 1981

Presented lectures to Dept. of Home Economics, WSU, "Wheat-Legume Interactions". Oct. 7.

Presented 10 2 hour seminar-lectures at the University of Sonora, Hermosillo, Mexico, Oct. 12-16, entitled: 1) "Quality control techniques on wheat used at the ARS, USDA, Wheat Quality Laboratories", (1 lecture). 2) "Biochemical, chemical, and physico-chemical changes that take place during the processing of cereals and legumes", (2 lectures). 3) "Discussions on Rheology", (2 lectures). 4) "Cereal and legume world wide food combinations", (3 lectures). 5) "Chemical, biochemical and physiochemical changes that occur to cereal (especially wheat) and legumes during germination", (2 lectures).

Western Wheat Quality Laboratory
1980 Crop

VISITORS

The Western Wheat Quality Laboratory Staff was pleased to have had the opportunity to meet, discuss, and give tours of our facilities with some 106 visitors this past year. Several of these people were wheat breeders, grain buyers, flour millers, students and various government officials with an interest in wheat quality. The following is a list, not all inclusive, to those who visited our facilities and signed our guest book:

W.S.U. Animal Science Department Laboratory Analysis Class	20
W.S.U. College of Agriculture Biometrics Class	23
W.S.U. Food Science & Technology Dept. Food Processing Class	14
U.S. Wheat Workers	14
Foreign:	
Egypt	3
Israel	1
Chile	2
Peru	1
Colombia	2
France	2
Korea	7
Japan	9
Taiwan	6
New Zealand	1
Australia	1

EARLY GENERATION NURSERIES
1980 Crop

<u>NURSERY</u>	<u>LOCATION</u>	<u>BREEDER</u>	<u>CLASS</u>	<u>NUMBER TESTED</u>	<u>NUMBER PROMISING</u>
Snow Mold	Harrington	Bruehl	SWW	53	30
Snow Mold	Lind	Bruehl	SWW	43	18
Snow Mold	Beard Farm	Bruehl	SWW	55	40
Soft White Winter	Ritzville	Peterson	SWW	252	177
Regional HRW	Pullman	Peterson	HRW	31	9
International Winter	Pullman	Peterson	HRW	29	13
HRS Single Plot	Pullman	Konzak	HRS	436	279
Advanced Clubs	Pullman	Allan	Club	357	202
Quality Samples	Pullman	Bruehl	SWW	66	47
Pullman Late Spray Trial Rep. III	Pullman	Allan	SWW	253	0*
Pullman Late Rep. II	Pullman	Allan	SWW	252	0*
Soft White Preliminary	Pullman	Konzak	SWS	444	331
Pullman Late: Composite Rep. I & III	Pullman	Allan	SWW	206	55
1980 Winter Wheat	Pendleton	Rohde	SWW	144	118
Colton No-Till (Pea Stubble)	Colton	Peterson	SWW	150	0*
Colton No-Till (Wheat Stubble)	Colton	Peterson	SWW	148	0*
No-Till(Barley Stubble)	Pullman	Peterson	SWW	153	0*
Barley Mgt. Trials	Pullman	Allan	SWW	199	0*
Wheat Stubble - Rep. I & II	Colton	Allan	SWW	197	0*
Moro Types Rep. I & II Composite	Pullman	Allan	SWW	105	84

<u>NURSERY</u>	<u>LOCATION</u>	<u>BREEDER</u>	<u>CLASS</u>	<u>NUMBER TESTED</u>	<u>NUMBER PROMISING</u>
White Seeded Selections	Pullman	Allan	SWW	90	58
Pea Stubble - Rep. I & II Nontreated and treated	Colton	Allan	SWW	198	0*
Pea Stubble - Rep. I & II Nontreated and treated	Colton	Allan	SWW	197	0*
Hard Red Single Plots	Pullman	Konzak	HRS	<u>28</u>	<u>15</u>
Totals:				4087	1476

* Complete Analysis were not made.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

ADVANCED SNOWMOLD

G.W. BRUEHL

LIND, WN

NURSCO 1

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH <u>1/</u>	MSCOR	FPROT <u>1/</u>	MABSC <u>3/</u>	MTYPE	BABS
800001	SPRAGUE	C1015376	SWW	63.2	70.6	0.42	84.9	8.5	56.9	2M	
800002	HATTON	C1017772	HRW	64.4	72.5	0.39	88.5	9.6	62.9	4M	64.9
800003		7713	5/SWW	63.2	70.6	0.40	86.2	9.0	57.7	3M	
800004		77-99-1	6/HRW	62.4	71.4	0.37	88.4	10.3	63.4	4M	66.1
800005		77-9902	6/HRW	63.2	72.2	0.37	89.2	10.8	62.9	4M	66.1
800006		77-261	5/CLUB	61.2	73.8	0.40	90.2	7.5	57.2	2M	
800007		77-287	5/SWW	64.0	71.0	0.38	87.9	8.7	57.7	2M	
800008		77-294	5/SWW	63.6	70.9	0.39	87.2	9.3	58.9	2M	
800009		FR-120	SWW	63.2	70.4	0.40	84.8	9.4	58.3	3M	
800010		77-367	6/HRW	62.8	71.2	0.36	88.7	9.0	63.1	4M	64.5

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics

3/ Absorption at 14% Moisture Corrected to 9% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.

NURSCO 1

LIND, WN

G.W. BRUEHL

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/
800001	SPRAGUE	C1015376	SWW	64.3	2.7	910	873	2	9.12	9.09
800002	HATTON	C1017772	HRW							
800003		7713	SWW							
800004		77-99-1	HRW	64.8	3.1	975	894	2	9.47	9.47
800005		77-9902	HRW	64.3	2.8	965	853	2		
800006		77-261	CLUB						9.24	9.13
800007		77-287	SWW						9.32	9.29
800008		77-294	SWW						9.34	9.37
800009		FR-120	SWW						8.81	8.86
800010		77-367	HRW	64.5	2.9	950	950	2		

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

4/ Observed Values Corrected to 9% Protein.

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

COMMENTS:

As a group these selections have good overall quality characteristics for their particular classes of wheat. Selection FR-120 is equal to Sprague in milling quality but appeared slightly poorer in pastry baking properties as judged by cookie diameter. Statistically it is not different than Sprague so further testing would be warranted if it has strong agronomic promise.

NURSCO 2

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH <u>1/</u>	MSCOR	FPROT <u>1/</u>	MABSC <u>3/</u>	CODI	CODIC <u>4/</u>	MTYPE	VISC
800011	NUGAINES	C1013968	SWW	63.0	70.4	0.41	84.6	9.5	59.4	9.26	9.20	3M	85
800012	HYSLOP	C1014564	SWW	60.6	69.4	0.44	81.5	10.1	57.4	9.00	9.01	3M	81
800013	DAWS	C1017419	SWW	59.5	68.7	0.43	81.2	10.3	57.6	9.07	9.09	3M	81
800014	STEPHENS	C1017569	SWW	58.2	69.3	0.45	80.7	9.5	57.4	8.86	8.83	3M	104
800015	FARO	C1017590	CLUB	61.3	72.5	0.44	85.4	9.5	56.3	9.11	9.08	2M	76
800016	TYEE	C1017773	CLUB	59.6	72.3	0.45	84.5	9.4	56.3	9.39	9.34	3M	71
800017	JACMAR		CLUB	61.2	70.6	0.43	82.9	9.5	56.2	9.29	9.26	2M	50
800018		OR795	SWW	58.6	68.5	0.44	80.3	10.1	58.3	9.27	9.29	3M	55
800019		OR797	<u>5/</u> SWW	60.0	72.8	0.44	85.8	9.8	56.1	9.29	9.27	2M	
800020		OR7142	<u>6/</u> CLUB	61.2	71.4	0.44	83.3	9.7	55.4	9.15	9.13	2M	76
800021		OR7786	<u>6/</u> SWW	59.7	70.6	0.43	83.6	9.7	55.8	9.09	9.06	3M	
800022		OR7792	<u>5/</u> SWW	62.4	73.2	0.42	87.5	9.1	55.8	9.32	9.23	3M	
800023		OR7794	<u>6/</u> SWW	61.0	69.8	0.42	83.2	9.4	56.6	8.95	8.88	3M	
800024		OR7921	<u>5/</u> SWW	62.7	72.3	0.43	85.8	10.5	60.0	8.88	8.94	2M	
800025		OR7925	HRW	59.9	70.6	0.39	86.0	9.9	61.6	8.44	8.44	6M	
800026		OR67237	<u>6/</u> SWW	60.1	69.5	0.45	81.0	9.9	57.0	8.87	8.86	4M	
800027		OR680073	<u>5/</u> SWW	59.5	72.3	0.46	83.2	10.1	57.6	9.03	9.04	2M	
800028	HYS/YAYLA/WA4993/ID71043	SEL 11-7	<u>6/</u> SWW	62.6	72.9	0.40	88.4	10.1	59.6	8.76	8.77	6M	

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein.4/ Observed Values Corrected to 10% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS: Flour yields for the nursery are below normal, while cookie spread appears above normal. OR795 had low test weight and this may be reflected in low flour yield. OR67327 and SEL. 11-7 are marginal in cookie diameter.

NOTE: OR7925 is a HRW.

NURSCO 3

PENDLETON, OR

C.R. RHOHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODIC 4/	MTYPE	VISC	4/
800029	NUGAINES	CI013968	SWW	64.4	70.4	0.41	81.6	5.7	55.5	8.94	2L	36	51
800030	HYSLOP	CI014564	SWW	62.9	71.8	0.42	83.7	5.9	56.5	8.61	2L	36	39
800031	DAWS	CI017419	SWW	62.2	72.5	0.42	84.5	5.5	55.0	8.58	2L	41	84
800032	STEPHENS	CI017569	SWW	61.3	72.8	0.40	84.6	6.0	55.5	8.89	2L	30	30
800033	FARO	CI017590	CLUB	61.3	73.1	0.40	87.3	5.6	55.2	9.11	2L	30	50
800034	TYEE	CI017773	CLUB	60.7	73.3	0.37	89.5	5.3	54.1	9.11	2L	30	110
800035	JACMAR		CLUB	61.7	70.9	0.40	83.7	5.7	55.0	8.94	2L	26	36
800036		OR744	6/SWW	62.0	72.5	0.40	84.4	5.9	55.8	8.91	2L		
800037		OR793	6/SWW	61.8	71.3	0.40	83.1	6.0	55.7	8.89	2L		
800038		OR795	6/SWW	60.4	71.0	0.41	82.1	5.9	56.0	9.17	2L		
800039		OR797	6/SWW	61.8	72.6	0.40	85.0	5.9	55.7	8.91	2L	33	47
800040		OR7142	6/CLUB	62.8	71.8	0.41	84.4	5.7	53.6	8.91	2L		
800041		OR7716	SWW	62.2	70.8	0.43	81.2	5.8	55.9	8.61	2L		
800042		OR7717	SWW	62.3	70.7	0.42	81.1	6.1	56.5	8.57	2L		
800043		OR7721	6/SWW	63.6	72.3	0.42	84.1	6.3	56.8	8.64	2L		
800044		OR7794	6/SWW	63.9	73.6	0.40	87.5	5.7	56.8	8.54	2L		
800045		OR67237	5/SWW	62.3	73.3	0.41	85.8	5.9	55.3	8.95	2L		
800046		OR680073	5/SWW	61.9	73.2	0.41	85.8	6.2	55.4	8.73	2L		

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 6% Protein.4/ Observed Values Corrected to 6% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS:

OR795 is marginal in milling quality - it is better than Nugaines but not as good as Hyslop, Daws, or Stephens, but it does have excellent pastry baking properties. OR7716 and OR7717 are questionable in overall quality.

NURSCO 4

ROYAL SLOPE, WN

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI 4/	CODIC	MTYPE
800047	URQUIE	C1017413	SWS	61.6	73.8	0.49	84.5	8.6	56.2	9.36	9.43	2M
800048		5/ K76344-9	SWS	61.2	76.0	0.45	89.9	8.0	57.1	9.37	9.37	2M
800049		K76344-10	SWS	60.0	70.2	0.45	82.4	7.5	56.7	9.39	9.33	1M
800050		6/ K76344-21	SWS	59.6	72.5	0.43	86.7	7.9	56.7	9.16	9.15	2M
800051		6/ K76344-22	SWS	62.0	73.0	0.43	87.3	7.8	56.9	9.22	9.20	2M
800052		6/ K76344-25	SWS	60.4	72.2	0.44	85.7	7.9	57.3	9.25	9.24	2M
800053		K76344-26	SWS	59.6	71.2	0.44	84.4	8.0	58.2	9.16	9.16	2M
800054		6/ K76344-29	SWS	60.0	73.1	0.44	86.8	7.7	57.6	9.12	9.09	2M
800055		K76344-30	SWS	59.2	71.0	0.45	83.5	7.8	58.0	9.19	9.17	2M
800056		5/ K76344-35	SWS	60.4	72.6	0.43	86.8	7.6	57.5	9.57	9.53	2M
800057		6/ K76344-40	SWS	61.2	72.5	0.44	86.1	7.5	57.4	9.54	9.48	2M
800058		6/ K76344-41	SWS	62.0	73.1	0.44	86.8	7.7	57.4	9.34	9.30	2M
800059		5/ K76344-42	SWS	61.2	73.1	0.41	88.7	7.7	56.4	9.25	9.22	2M
800060		5/ K76344-43	SWS	60.8	73.2	0.43	87.5	8.7	57.0	9.41	9.49	1M
800061		6/ K76344-44	SWS	61.6	72.7	0.42	87.5	8.0	57.1	9.29	9.29	2M
800062		K76344-47	SWS	60.8	70.3	0.46	82.0	8.6	56.8	9.00	9.07	2M
800063		K76344-49	SWS	59.2	70.5	0.44	83.5	8.0	56.2	9.36	9.36	2M
800064		6/ K76344-53	SWS	59.6	71.8	0.44	85.1	8.0	56.6	9.41	9.41	2M
800065		6/ K76344-54	SWS	60.4	71.5	0.43	85.4	8.1	56.6	9.37	9.39	2M
800066		6/ K76344-55	SWS	60.0	71.2	0.43	85.0	8.1	57.0	9.46	9.47	2M
800067		K76344-67	HWS	57.2	72.0	0.56	77.7	9.6	59.5	8.75	8.88	4M
800068		6/ K76344-71	SWS	60.0	71.7	0.44	85.0	8.0	57.1	9.27	9.27	2M
800069		K76344-72	SWS	59.6	69.8	0.45	82.0	8.7	56.4	9.09	9.16	2M
800070		6/ K76344-73	SWS	62.0	72.2	0.44	85.7	8.3	57.3	9.32	9.36	2M
800071		K76344-74	SWS	60.0	70.3	0.50	79.4	7.6	56.6	9.22	9.18	1M
800072		K76344-76	SWS	59.2	70.5	0.45	82.8	8.1	57.6	9.31	9.32	2M
800073		K76344-78	SWS	60.0	71.3	0.44	84.5	7.7	57.1	9.30	9.27	2M
800074		6/ K76344-79	SWS	60.0	71.9	0.45	84.6	7.8	57.4	9.29	9.27	2M
800075		K76344-86	SWS	58.0	69.8	0.44	82.6	8.2	57.5	9.39	9.41	2M
800076		K76344-93	SWS	60.8	71.3	0.47	82.6	8.1	58.1	9.26	9.27	3M
800077		K76344-94	SWS	58.4	69.8	0.45	82.0	8.3	57.4	9.15	9.18	2M
800078		6/ K76344-98	SWS	60.8	71.5	0.43	85.4	8.2	58.0	9.21	9.23	2M
800079		6/ K76344-101	SWS	62.0	72.2	0.42	86.9	7.9	56.9	9.19	9.18	2M
800080		K76344-102	SWS	59.2	69.5	0.44	82.2	7.4	56.3	9.16	9.10	1M
800081		K76344-103	SWS	59.6	71.0	0.42	85.4	7.7	56.6	9.47	9.44	2M

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 8% Protein.5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 8% Protein.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

INCREASE SWS SELECTIONS

NURSCO 4

ROYAL SLOPE, WN

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
800082		K76344-107	SWS	60.0	71.0	0.42	85.4	7.3	56.6	9.36	9.29	2M
800083		K76344-108	SWS	61.2	70.6	0.42	84.9	7.7	56.7	9.45	9.42	2M
800084		K76344-111	SWS	60.8	69.2	0.43	82.4	7.6	56.7	9.29	9.24	2M
800085		K76344-112	SWS	61.6	71.9	0.42	86.6	7.3	57.0	9.14	9.06	2M
800086		<u>6/</u> K76344-115	SWS	61.2	71.7	0.43	85.7	7.4	57.5	9.24	9.17	2M
800087		K76344-116	SWS	62.0	70.6	0.42	84.9	7.6	58.3	9.40	9.36	2M
800088		K76344-118	SWS	62.4	71.5	0.43	85.4	7.4	58.1	9.02	8.96	2M
800089		K76344-123	SWS	61.2	70.9	0.42	85.3	7.8	58.1	9.55	9.53	2M
800090		K76344-124	SWS	61.2	69.8	0.41	84.5	7.9	58.0	9.32	9.31	2M
800091		<u>6/</u> K76344-126	SWS	62.0	71.7	0.42	86.3	7.7	58.7	9.24	9.20	2M
800092		<u>6/</u> K76344-140	SWS	60.4	71.4	0.42	85.9	7.8	58.1	9.42	9.40	2M
800093		K76344-145	SWS	60.8	70.9	0.43	84.6	8.1	58.2	9.47	9.49	2M
800094		K76344-146	SWS	61.2	71.4	0.45	84.0	8.7	58.0	9.06	9.14	1M
800095		K76344-147	SWS	58.8	68.6	0.44	81.1	8.7	58.1	9.25	9.33	2M
800096		<u>6/</u> K76344-148	SWS	60.4	71.8	0.45	84.5	9.2	57.0	9.34	9.47	1M
800097		K76344-157	SWS	60.0	70.1	0.43	83.6	8.2	58.1	9.49	9.51	2M
800098		K76344-158	SWS	56.0	68.4	0.47	78.9	7.9	56.4	9.25	9.24	1M
800099		K76344-167	SWS	60.0	70.7	0.46	82.4	8.2	56.7	9.20	9.22	2M
800100		K76344-168	SWS	60.4	70.8	0.44	83.8	7.9	57.2	9.10	9.09	2M
800101		K76344-169	SWS	60.0	71.0	0.44	84.1	7.9	57.4	9.35	9.34	2M
800102		K76344-170	SWS	58.8	70.1	0.44	82.9	7.9	56.8	9.41	9.40	2M
800103		K76344-175	SWS	58.4	70.5	0.45	82.8	7.9	57.4	9.34	9.33	2M
800104		K76344-176	SWS	59.2	70.3	0.44	83.2	7.9	57.3	9.30	9.29	2M
800105		K76344-179	SWS	58.4	70.3	0.45	82.6	8.0	57.2	9.11	9.11	2M
800106		K76344-180	SWS	58.4	68.1	0.46	79.1	8.8	56.9	9.07	9.16	2M
800107		K76344-191	SWS	59.6	70.2	0.45	82.4	8.2	57.7	9.39	9.41	2M
800108		K76344-192	SWS	58.8	69.7	0.44	82.4	8.3	57.4	9.04	9.07	2M
800109		K76344-193	SWS	57.6	69.5	0.45	81.6	8.5	56.8	9.20	9.25	2M
800110		K76344-194	SWS	60.4	70.6	0.44	83.6	8.3	56.9	9.42	9.46	2M
800111		<u>6/</u> K76344-223	SWS	61.6	71.6	0.45	84.2	8.2	56.6	9.41	9.43	2M
800112		K76344-224	SWS	58.0	69.7	0.44	82.4	8.2	56.1	9.36	9.38	2M
800113		K76344-229	SWS	58.0	68.1	0.48	77.8	7.7	57.1	9.07	9.04	1M
800114		K76344-230	SWS	58.8	70.2	0.45	82.4	8.0	56.8	9.26	9.26	2M
800115		<u>6/</u> K76344-231	SWS	61.2	71.7	0.43	85.7	7.8	57.0	9.47	9.45	2M
800116		<u>6/</u> K76344-232	SWS	62.0	71.8	0.42	86.4	7.7	57.2	9.11	9.08	2M

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 8% Protein.

NURSCO 4

ROYAL SLOPE, WN

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
800117		K76344-233	SWS	59.2	68.9	0.45	80.8	7.3	57.1	9.11	9.04	2M
800118		K76344-234	SWS	60.4	70.6	0.43	84.2	7.5	57.9	9.12	9.07	2M
800119		K76344-235	SWS	58.8	69.9	0.43	83.3	7.8	57.2	9.36	9.34	2M
800120		K76344-236	SWS	58.8	69.7	0.43	83.1	8.0	57.4	9.39	9.39	2M
800121		K76344-237	SWS	60.0	70.5	0.43	84.1	7.8	57.6	9.32	9.30	2M
800122		K76344-238	SWS	58.8	70.3	0.44	83.2	8.2	57.5	9.60	9.62	2M
800123		K76344-239	SWS	57.2	69.1	0.45	81.1	8.5	58.2	9.21	9.27	2M
800124		K76344-240	SWS	59.2	70.2	0.45	82.4	8.1	58.2	9.12	9.14	2M
800125		K76344-241	SWS	57.6	68.9	0.46	80.2	8.5	58.2	9.00	9.05	2M
800126		K76344-242	SWS	60.4	70.6	0.45	82.9	8.3	57.9	9.50	9.53	2M
800127		K76396-6	SRW	58.8	69.8	0.43	83.2	9.1	57.7	9.29	9.41	3M
800128		6/ K76396-13	SWS	59.6	72.8	0.47	84.5	9.0	58.8	9.05	9.16	3M
800129		K76396-35	SWS	56.8	69.2	0.47	79.9	8.9	57.3	9.32	9.42	3L
800130		6/ K76396-51	SRW	60.8	74.8	0.46	87.7	9.4	58.3	8.71	8.87	3M
800131		K76396-56	SWS	58.0	68.1	0.46	79.1	10.1	59.1	9.10	9.33	3M
800132		K76396-95	SWS	59.6	69.3	0.45	81.3	10.2	59.0	9.14	9.38	3M
800133		K76396-101	SWS	56.0	67.9	0.46	78.9	10.7	59.0	9.20	9.50	3M
800134		K76396-103	SWS	61.2	68.2	0.44	80.6	10.7	59.5	9.07	9.37	3M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

4/ Observed Values Corrected to 8% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 5

ID, OR, MT, AND WA

LABNUM	VARIETY	IDNO	CLASS	FYELD	FASH	MSCOR	FPROT	FABS	FPEAK	FSTAB	VISC	VISCC
800135	SW SOUTHERN IDAHO		SWW	71.7	0.42	83.4	7.3	53.7	1.0	2.2	38	62
800136	SW NORTHERN IDAHO		SWW	71.9	0.42	82.8	7.7	54.5	1.2	3.5	61	87
800137	SW EASTERN OREGON, PENDLETON AREA		SWW	72.9	0.42	84.4	7.3	51.9	1.0	2.0	40	49
800138	SW EASTERN OREGON, RIVER COUNTRY		SWW	70.8	0.38	82.2	6.6	52.2	0.5	1.2	37	97
800139	CLUB EASTERN OREGON, RIVER COUNTRY		CLUB	72.1	0.39	85.5	6.3	50.8	1.3	1.7	37	77
800140	SW WESTERN OREGON, WILLAMETTE V.		SWW	71.4	0.43	81.6	7.4	53.5	0.5	1.2	39	53
800141	SW EASTERN WASHINGTON, PALOUSE		SWW	71.8	0.44	81.6	7.6	54.9	1.1	1.5	61	95
800142	SW EASTERN WASHINGTON, S & E OF SNAKE R		SWW	71.6	0.40	82.7	8.7	53.7	0.7	3.2	66	73
800143	SW EASTERN WASHINGTON, BIG BEND AREA		SWW	70.4	0.43	79.6	8.7	55.4	0.8	2.9	67	74
800144	CLUB EASTERN WASHINGTON, BIG BEND AREA		CLUB	73.4	0.42	86.2	7.6	52.8	0.8	2.2	46	65
800145	HRW EASTERN WASHINGTON, BIG BEND AREA		HRW	71.7	0.40	85.5	11.1	63.6	6.0	5.0	190	127
800146	HRW SOUTHERN IDAHO		HRW	68.9	0.42	80.9	10.3	62.1	5.0	9.6	170	128
800147	HRS - WHITEWATER, MT PHILLIPS CO.		HRS	64.1	0.39	74.4	13.2	67.0	12.3	14.2	329	124
800148	HRW - TETON COUNTY, MT		HRW	67.2	0.42	77.5	9.4	61.8	3.5	6.5	133	95
800149	HRS - TETON COUNTY, MT		HRS	71.1	0.45	82.2	11.6	62.1	6.0	12.5	177	84
800150	HRW - TETON COUNTY, MT		HRW	69.0	0.40	81.6	10.1	64.3	5.8	5.2	173	106
800151	HRW - CASCADE COUNTY, MT		HRW	67.6	0.41	79.4	8.1	59.4	2.4	6.0	93	93

NURSCO 5

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC
800135	SW SOUTHERN IDAHO		SWW							8.91	8.78
800136	SW NORTHERN IDAHO		SWW							8.61	8.51
800137	SW EASTERN OREGON, PENDLETON AREA		SWW							8.81	8.74
800138	SW EASTERN OREGON, RIVER COUNTRY		SWW							8.90	8.69
800139	CLUB EASTERN OREGON, RIVER COUNTRY		CLUB							8.93	8.82
800140	SW WESTERN OREGON, WILLAMETTE V.		SWW							8.71	8.62
800141	SW EASTERN WASHINGTON, PALOUSE		SWW							8.64	8.52
800142	SW EASTERN WASHINGTON, S & E OF SNAKE R		SWW							8.62	8.59
800143	SW EASTERN WASHINGTON, BIG BEND AREA		SWW							8.66	8.62
800144	CLUB EASTERN WASHINGTON, BIG BEND AREA		CLUB							8.90	8.84
800145	HRW EASTERN WASHINGTON, BIG BEND AREA		HRW	66.2	62.8	3.0	1003	953	2	7.96	8.08
800146	HRW SOUTHERN IDAHO		HRW	66.7	64.9	3.4	935	929	2	8.02	8.10
800147	HRS - WHITEWATER, MT PHILLIPS CO.		HRS	69.4	64.9	3.8	1275	1089	2		
800148	HRW - TETON COUNTY, MT		HRW	65.0	64.0	5.6	823	873	0		
800149	HRS - TETON COUNTY, MT		HRS	65.8	62.8	3.4	1038	951	2		
800150	HRW - TETON COUNTY, MT		HRW	65.4	64.0	2.7	935	941	2		
800151	HRW - CASCADE COUNTY, MT		HRW	63.7	64.6	3.9	760	884	0		

NURSCO 6

DAVIS, CA

D.G. GILCHRIST

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/
800153	INIA 66R	C1014195	HRS	64.8	69.1	0.38	82.5	11.1	69.0		
800154	ANZA	C1015284	HRS	65.3	71.0	0.38	85.4	9.7	66.0		
800155	CLEO X INIA 66R F8	960/20013 5/	HRS	63.9	71.8	0.38	87.5	10.0	66.8		
800156	CLEO X INIA 66R F8	960/20025	HRS	63.5	70.6	0.33	85.5	10.1	60.0	8.82	8.83
800157	CLEO X INIA 66R F8	960/20069	HRS	63.3	69.3	0.34	82.4	10.5	60.6	8.44	8.48
800158	CLEO X INIA 66R F8	960/20075	HRS	63.0	69.8	0.33	84.2	9.6	63.3	8.54	8.51
800159	CLEO X INIA 66R F8	960/20096	HRS	63.9	69.7	0.40	82.5	10.0	66.0		
800160	CLEO X INIA 66R F8	960/20103	HRS	62.6	70.0	0.34	84.0	10.9	63.1	8.65	8.72
800161	TADORNA X INIA 66R F7	980/136	HRS	63.2	69.6	0.34	83.6	10.4	61.5	8.67	8.71
800162	(CLEO X INIA) ANZA F4	960/20192 6/	HRS	65.3	69.8	0.36	84.2	10.6	68.2		
800163	(CLEO X INIA) ANZA F4	960/20458	HRS	63.8	67.6	0.37	80.5	10.0	61.7		
800164	(CLEO X INIA) ANZA F4	960/20192 6/	HRS	65.5	70.1	0.36	84.9	10.7	66.9		

COMMENTS: Selection 960/20025 has soft endosperm with low water absorption and short dough mixing requirement typical of soft wheat. The selection appears to have good pastry properties (cookie diameter) and also produced a good loaf of bread indicating dual purpose properties. Selections 960/20069, 20075, 20103 and 980/13 also were soft in endosperm texture, but all appeared to make satisfactory bread. 20069 and 20075 do not have good cookie diameter. 20103 has dual baking properties with mixing time being border line (questionable). Selection 960/20096 had poor loaf volume and crumb texture. While 980/13 had soft endosperm it performed quite well in bread baking and cookie diameter and looks promising as a dual purpose type wheat. 960/20458 was low in flour yield.

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/

Particularly Promising Overall Quality Characteristics.

6/

Promising Overall Quality Characteristics.

LABNUM	VARIETY	IDNO	CLASS	MTYPE	BABS 1/	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
800153	INIA 66R	C1014195	HRS	5H	71.5	70.4	3.5	1015	947	2
800154	ANZA	C1015284	HRS	2H	67.1	67.4	2.0	810	828	6
800155	CLEO X INIA 66R F8	960/20013	HRS	3H	67.2	67.2	2.5	940	940	2
800156	CLEO X INIA 66R F8	960/20025	HRS	2M	57.0	56.9	1.0	918	912	2
800157	CLEO X INIA 66R F8	960/20069	HRS	4M	60.0	59.5	2.2	996	965	2
800158	CLEO X INIA 66R F8	960/20075	HRS	6M	61.3	61.7	2.7	1010	1035	1
800159	CLEO X INIA 66R F8	960/20096	HRS	4M	68.9	68.9	2.4	810	810	6
800160	CLEO X INIA 66R F8	960/20103	HRS	3M	64.4	63.5	1.8	1010	954	2
800161	TADORNA X INIA 66R F7	980/13	HRS	6M	63.3	62.9	3.4	1037	1012	2
800162	(CLEO X INIA) ANZA F4	960/20192	HRS	4H	70.2	69.6	2.6	1050	1013	1
800163	(CLEO X INIA) ANZA F4	960/20458	HRS	3M	63.1	63.1	2.4	1020	1020	2
800164	(CLEO X INIA) ANZA F4	960/20192	HRS	3H	69.0	68.3	2.5	1022	979	2

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PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>		<u>4/</u>	
800165 DAWS		C1017419	SWW	61.2	76.9	0.50	87.2	9.6	52.9	9.16	9.12	1M
800166 STEPHENS		C1017596	SWW	60.0	73.0	0.52	80.3	9.8	55.8	8.51	8.49	3M
800167 HYSLOP/YAYLA/WA4995/ID5012 W1066		OR7910	<u>6/</u> SWW	60.8	74.4	0.51	82.6	10.8	56.4	9.00	9.09	2M
800168 HYSLOP/YAYLA/WA4995/ID5012 W1071		OR7911	SRW	60.4	72.7	0.52	79.9	11.4	55.6	8.69	8.84	2M
800169 63-112-66-4/YAYLA/63-112-66-4/ID7104		OR7913	<u>6/</u> SWW	60.4	73.6	0.49	82.9	10.3	56.8	9.10	9.13	3M
800170 63-112-66-4/YAYLA/63-112-66-4/ID7104		OR7914	<u>6/</u> SWW	62.4	74.8	0.50	84.5	11.0	58.1	8.76	8.87	3M
800171 63-112-66-4/YAYLA/63-112-66-4/ID7104		OR7915	<u>6/</u> SWW	62.8	73.9	0.50	83.3	10.6	58.1	8.91	8.98	3M
800172 63-112-66-4/YAYLA/63-112-66-4/ID7104		OR7917	<u>6/</u> SWW	61.2	74.4	0.49	84.6	10.9	58.5	8.70	8.80	3M
800173 63-112-66-4/YAYLA/63-112-66-4/ID7104		OR7918	HWW	61.2	71.5	0.46	83.3	10.0	59.3	8.74	8.74	2M
800174 63-112-66-4/YAYLA/63-112-66-4/ID7104		OR7923	<u>5/</u> SWW	62.0	74.9	0.48	85.9	10.4	58.2	9.10	9.14	2M
800175 LUKE/OR69118 W1175		OR7924	<u>6/</u> SWW	61.6	73.1	0.51	81.1	10.2	57.9	8.71	8.73	4M
800176 LUKE/OR69118 W1185		OR7927	<u>6/</u> SWW	63.2	73.7	0.51	82.4	10.0	58.1	8.91	8.91	4M
800177 LUKE/MCDERMID W1199		OR7928	<u>5/</u> SWW	61.6	74.7	0.48	85.0	9.9	57.7	8.92	8.91	4M
800178 VAKKA/VH70774 W1329		OR7935	HRW	63.6	72.3	0.43	85.7	11.2	58.2	8.29	8.38	3M
800179 PITIC 62/CP137 W1388		OR7937	<u>5/</u> SWW	63.6	74.8	0.46	86.4	11.4	55.7	9.02	9.18	1M
800180 YAYLA/YMH//RIED/YMH/3/REW		OR7939	<u>5/</u> SWW	63.6	74.6	0.49	84.2	10.1	56.6	8.89	8.90	2M
800181 YAYLA/YMH//RIED/YMH/3/REW		OR7942	<u>6/</u> SWW	61.2	74.1	0.50	82.9	9.8	55.9	9.15	9.13	2M
800182 YAYLA/YMH//RIED/YMH/3/REW		OR7944	<u>5/</u> SWW	63.2	75.9	0.47	87.8	9.6	54.9	8.95	8.91	2M
800183 YAYLA/YMH//RIED/YMH/3/REW		OR7946	<u>5/</u> SWW	62.0	75.1	0.47	86.8	10.1	55.3	9.10	9.11	2M
800184 CERCO/SPRAGUE W1546		OR7949	HWW	61.6	73.5	0.47	84.9	10.3	59.7	8.32	8.35	2H
800185 OR69136/PAHA W1812		OR7951	<u>5/</u> SWW	63.2	75.1	0.46	88.7	10.1	54.3	9.22	9.24	1M
800186 CERCO/REW W1839		OR7952	HRW	62.8	72.5	0.43	85.9	10.4	60.1	8.26	8.29	1H
800187 CERCO/REW W1888		OR7953	HWW	63.2	74.1	0.42	88.1	10.2	61.7	8.29	8.30	3M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

COMMENTS: OR7911 appeared mixed with mostly red seed coat. OR7918, OR7949 and OR7953 were judged as hard texture white wheats. OR7935 and OR7952 are HRW's with typical hard red properties.

NURSCO 8

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
800188	DAWS	C1017419	SWW	54.7	67.2	0.54	69.3	9.9	56.4	8.29	8.28	3M
800189	STEPHENS	C1017596	SWW	57.2	71.4	0.50	77.1	9.9	55.6	8.57	8.56	2M
800190	SEL 100	OR762	SWW	57.1	70.0	0.54	74.4	10.4	56.3	8.33	8.38	3M
800191	6720/63-112-66-2	OR772	6/ SWW	58.1	70.7	0.52	76.0	9.3	56.8	8.37	8.30	3M
800192	CROSS UNKNOWN SM174-95	OR773	SWW	58.8	67.7	0.48	73.1	10.2	56.5	8.30	8.32	4M
800193	HYSLOP/OR6739 SEL 744	OR774	SWW	57.0	68.1	0.48	73.4	9.8	57.6	8.32	8.30	3M
800194	OWW69-169-1W5	OR776	SWW	56.8	67.1	0.49	71.9	10.0	57.2	8.39	8.39	3M
800195	CAPPELLE DESPREZ/OR69122, SEL391	OR793	SWW	53.4	68.7	0.49	72.9	10.1	57.3	8.56	8.57	4M
800196	LUKE/OR696 82-6	OR795	SWW	54.5	67.3	0.51	71.0	9.8	57.7	8.72	8.70	3M
800197	63-112-66-4/YAYLA//63-112-66-4/3/ID7104	OR801	6/ SWW	59.8	70.7	0.50	76.8	9.7	56.9	8.62	8.59	3M
800198	DAWS*2/SEL M72-330	OR803	SWW	56.0	66.2	0.52	68.9	10.2	57.2	8.17	8.19	2H
800199	DAWS*2/SEL M72-330	OR804	SWW	56.0	68.3	0.50	73.1	10.2	58.1	8.27	8.29	4M
800200	DAWS*2/SEL M72-330	OR805	SWW	57.4	68.1	0.50	73.6	9.6	57.6	8.28	8.24	4M
800201	SEL M72-330/2*DAWS A381	OR806	SWW	57.3	69.5	0.55	72.9	9.4	57.0	8.41	8.34	4M
800202	HYSLOP/CERCO	OR7713	SWW	58.9	68.7	0.50	73.6	10.0	59.0	8.44	8.44	4M
800203	CERCO/SPRAGUE	OR7715	6/ SWW	59.4	69.3	0.48	76.2	9.8	58.6	8.46	8.43	3M
800204	CERCO/SPRAGUE	OR7716	6/ SWW	58.1	69.6	0.47	76.7	9.9	58.3	8.28	8.27	3M
800205	HYSLOP/YAYLA//63-112-66-4/3/	OR7724	SWW	58.2	67.7	0.49	71.6	9.9	57.8	8.44	8.43	4M
800206	HYSLOP/YAYLA//63-112-66-4/3/	OR7726	6/ SWW	57.5	70.3	0.48	77.0	9.7	57.2	8.57	8.54	3M
800207	HYSLOP/YAYLA//63-112-66-4/3/	OR7729	SWW	56.9	70.0	0.48	75.3	10.0	57.2	8.61	8.61	2M
800208	63-112-66-4/YAYLA//63-112-66-4/3/	OR7769	5/ SWW	57.3	71.1	0.48	78.2	9.8	59.4	8.69	8.67	4M
800209	HYSLOP/YAYLA//WA4995/3/ID71043 SEL11-7	OR7942	5/ SRW	62.1	72.7	0.45	81.9	10.4	62.1	8.36	8.40	3H
800210	A586	OWWF51	6/ SWW	57.8	71.1	0.49	77.4	10.0	57.9	8.55	8.55	3M
800211	A598	OWWF161	6/ SRW	57.6	69.6	0.46	77.1	10.3	57.9	8.51	8.55	3M
800212	A606	OWWF281	SWW	59.2	69.9	0.50	75.4	10.2	57.3	8.47	8.49	2M
800213	A616	OWWF318	SRW	56.5	69.6	0.50	74.8	10.7	57.8	8.35	8.43	2M
800214	A613	OWWF319	SRW	57.4	69.4	0.46	74.7	10.4	58.1	8.66	8.70	2M
800215	A616	OWWF332	6/ SRW	56.2	70.0	0.46	76.4	10.2	58.6	8.68	8.70	2M
800216	RB/1523-DC	FW73830CPO 6/ SWW	6/ SWW	58.8	69.9	0.43	78.5	10.0	58.1	8.61	8.61	2M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

COMMENTS: This nursery had low test weights with most samples showing shriveled/pinched kernels. The shriveling was reflected in low flour yields. The check variety Daws was very shriveled and therefore most emphasis was placed on Stephens when comparing the experimental selections. Selections which were below Stephens in flour yield and milling score were considered questionable and not footnoted as promising. Selections OR7942, OWWF318, OWWF161, OWWF319 and OWWF332 were distinctly red in color and were classified as soft red's. This color may have been accentuated by the growing conditions, but should be noted.

NURSCO 9

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE
					<u>1/</u>			<u>1/</u>	<u>3/</u>		<u>4/</u>	
800217	DAWS	C1017419	SWW	61.2	69.9	0.45	81.5	8.6	57.4	8.71	8.67	3L
800218	FARO	C1017590	CLUB	62.0	73.1	0.46	84.9	8.5	56.0	9.26	9.23	2M
800219	STEPHENS	C1017596	SWW	59.2	69.8	0.44	82.0	9.5	56.9	9.31	9.37	2L
800220	HYSLOP/YAYLA//63-112-66-4/REW A19	OR807	<u>5/SWW</u>	63.2	72.7	0.40	88.2	9.5	57.6	8.99	9.04	3M
800221	63-112-66-4/YAYLA//63-112-66-4/	OR809	SWW	60.0	66.2	0.45	76.7	10.1	55.9	9.14	9.26	2M
800222	63-112-66-4/YAYLA//63-112-66-4/	OR8012	<u>5/SWW</u>	62.0	73.0	0.44	86.1	8.9	56.5	9.32	9.31	2M
800223	HYSLOP/YAYLA//63-112-66-4/	OR8013	SWW	62.4	66.4	0.38	81.5	9.2	57.3	9.01	9.03	3L
800224	HYSLOP/YAYLA//63-112-66-4/	OR8014	<u>6/SWW</u>	60.4	69.7	0.44	81.8	8.8	56.4	9.00	8.98	4L
800225	LUKE/C1014565 A156	OR8018	SWW	60.0	67.6	0.41	81.1	8.5	56.4	9.10	9.04	3L
800226	DAWS*2/SEL M72-330(PW77-42)	OR8019	SWW	59.6	68.3	0.44	80.0	8.5	56.9	8.67	8.62	5L
800227	DAWS*2/SEL M72-330(PW77-42)	OR8024	<u>6/SWW</u>	62.4	70.5	0.40	85.4	8.8	56.6	8.86	8.84	5L
800228	DAWS*2/SEL M72-330(PW77-42)	OR8025	<u>6/SWW</u>	61.2	70.4	0.41	84.6	8.5	57.1	8.57	8.52	5L
800229	DAWS*2/SEL M72-330(PW77-42)	OR8026	<u>6/SWW</u>	62.4	70.2	0.41	84.4	8.4	57.2	8.94	8.87	5L
800230	DAWS*2/SEL M72-330(PW77-42)	OR8027	<u>6/SWW</u>	62.0	70.6	0.41	84.9	8.6	57.0	8.86	8.82	5L
800231	DAWS*2/SEL M72-330(PW77-43)	OR8030	<u>6/SWW</u>	62.0	69.2	0.41	83.1	8.4	57.1	8.59	8.52	5L
800232	DAWS*2/SEL M72-330(PW77-43)	OR8031	<u>6/SWW</u>	62.0	70.3	0.39	85.8	8.7	56.9	8.65	8.62	5L
800233	SEL M72-330/2*DAWS(PW77-46)	OR8036	<u>6/SWW</u>	60.4	69.8	0.45	81.3	9.0	56.0	8.82	8.82	6L
800234	SEL M72-330/2*DAWS(PW77-49)	OR8039	<u>6/SWW</u>	60.4	69.5	0.43	82.2	8.7	56.3	8.56	8.53	3M
800235	SEL M72-330/2*DAWS(PW77-49)	OR8040	SWW	60.4	68.1	0.43	80.4	9.0	56.6	8.72	8.72	3M
800236	SEL M72-330/2*DAWS(PW77-49)	OR8042	SWW	58.8	67.3	0.44	78.7	9.0	56.6	8.72	8.72	4M
800237	SEL M72-330/2*DAWS(PW77-49)	OR8043	<u>6/SWW</u>	61.2	68.1	0.42	81.1	9.2	56.4	8.69	8.71	4M
800238	SEL M72-330/2*DAWS(PW77-49)	OR8044	SWW	60.0	68.4	0.47	78.2	9.5	55.3	8.72	8.78	4M
800239	P101/ANZA SWD 71340-1H-1H-1P-OH	6THSNY173	<u>5/SWW</u>	60.8	70.0	0.39	85.4	8.9	55.9	9.30	9.29	2M
800240	69-153/YMH//67-237-69-24 OWW73210	HWPYT 87	SWW	64.0	64.4	0.40	77.6	9.6	56.3	8.57	8.64	4M
800241		OWWF 35	<u>6/SWW</u>	61.6	60.1	0.41	82.9	9.3	55.6	9.06	9.10	3M

1/ Observed Values Corrected to 14% Moisture Basis.5/ Particularly Promising Overall Quality Characteristics.3/ Absorption at 14% Moisture Corrected to 9% Protein.6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 9% Protein.

COMMENTS: Selection numbers OR809, OR8013, OR8018, OR8019, OR8040, OR8042, OR8044 and HWPYT87 were lower to varying degree in overall milling properties than Daws or Stephens. Selections OR8025, OR8030 and OR8039, which have been noted as promising overall quality, are questionable in cookie diameter when compared to the check variety. This may not be serious but should be noted.

NURSCO 10

HOOPER, WA

H. JACQUOT

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE	VISC
					<u>1/</u>			<u>1/</u>		<u>3/</u>			<u>4/</u>
800242	OMAR	C1013072	CLUB	61.4	74.0	0.39	88.6	7.4	51.3	8.92	8.95	1M	33
800243	GAINES	C1013448	SWW	63.2	69.0	0.38	79.8	7.7	53.5	8.72	8.81	3M	50
800244	PAHA	C1014485	CLUB	62.0	73.7	0.39	88.7	7.2	51.4	9.14	9.14	2M	33
800245	BARBEE	C1017417	CLUB	61.8	71.8	0.41	82.9	7.1	50.6	9.20	9.21	1M	73
800246	DAWS	C1017419	SWW	63.3	71.0	0.41	81.8	7.9	55.0	8.39	8.49	4M	94
800247	FARO	C1017590	CLUB	61.5	73.1	0.40	87.0	7.8	53.1	8.90	8.96	3M	50
800248	STEPHENS	C1017596	SWW	61.6	72.3	0.39	84.3	8.4	54.7	8.79	8.94	2M	69
800249	TYEE	C1017773	CLUB	60.8	73.8	0.39	88.5	7.1	53.1	8.82	8.83	3L	43
800250	JACMAR (CH)		CLUB	60.5	73.4	0.40	86.9	7.2	53.1	9.14	9.15	2M	51
800251	JACMAR WH		<u>6/</u> CLUB	60.7	73.3	0.41	87.3	7.3	52.3	9.32	9.34	2M	38
800252		SN 267-75	<u>6/</u> CLUB	60.7	72.8	0.41	85.0	7.3	52.4	9.19	9.22	3L	67
800253		SN 339-79	<u>5/</u> SWW	60.0	74.2	0.42	88.3	7.1	53.2	9.03	9.04	6L	40
800254		SN 350-78	<u>5/</u> CLUB	61.2	74.5	0.42	88.2	7.5	53.3	9.29	9.32	3L	44
800255		SN 354-78	<u>6/</u> CLUB	61.7	72.4	0.41	85.3	7.7	53.0	9.14	9.19	2M	44
800256		SN 414-79	<u>6/</u> CLUB	60.3	72.3	0.42	84.6	7.2	53.7	9.34	9.36	3L	35

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 7 % Protein.4/ Observed Values Corrected to 7% Protein.5/

Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS:

JACMAR WH = "Winter Hardy Strain" that is similiar to Jacmar in overall quality characteristics. The Winter hardy strain does appear however to have higher viscosity than Jacmar. SN 267-75, SN 345-78 and SN 414-79 have marginal flour yields to meet traditional club wheat milling performance, but in view of their outstanding agronomic performance (see page 2) further testing is warranted.

TABLE 1. AGRONOMIC AND YIELD DATA FOR WINTER WHEAT VARIETIES AND SELECTIONS GROWN ON THE MCGREGOR RANCH IN 1980
CROP YEAR FOR SAMPLES SUBMITTED FOR MILLING AND BAKING ANALYSIS BY THE WHEAT QUALITY LAB AT WSU.

Variety or Selection	% Stand	Pl. Ht. Inches	Head Color	Type	Arms	Bu. Wt. Pounds	Grain Yield Bushel/Acre	Per Cent of Paha	Remarks
Omear	90	44	Red	Club	None	60.7	56.1	73	40% lodging
Earbee	95	35	"	"	Yes	60.8	64.4	84	Small heads
Faro	75	34	"	"	None	60.5	68.6	89	20% W.D.(1), Variable plant height
Gaines	100	34	White	Com.	Yes	62.5	69.8	91	30% W.D.(1), 10% Foot rot
lyee	60	37	"	Club	None	59.8	75.6	98	20% W.D.(1)
Stephens	75	32	"	Com.	Yes	61.2	76.3	99	80% W.D.(1)
Daws	100	38	"	"	"	62.5	76.4	99	20% Y.D.V.(2)
Paha	80	40	Red	Club	None	61.3	76.8	100	10% Lodging
Jacmar	85	34	"	"	"	59.5	84.3	110	Relatively early leaf rust infection
Jacmar Wh(6)	90	34	"	"	"	59.7	84.8	110	" " " " "
SN-267-75	95	32	"	"	"	59.8	84.2	110	Better leaf rust resistance
SN-350-78	75	36	"	"	"	61.0	85.5	111	" " " " "
SN-354-78	80	34	"	"	"	61.0	89.0	116	" " " " "
SN-414-79	90	39	"	"	"	59.0	85.4	111	" " " " "
SN-335-79	100	34	"	Com.	Yes	60.0	92.6	121	20% lodging(5)

(1) Winter damage; (2) Yellow Dwarf Virus; (3) Better leaf rust resistance than Jacmar; (4) Faro has variable plant height; (5) Has prospect of high potential grain yield; (6) Winter hardy strain.

Sixty pounds of nitrogen was applied in stubble mulch summer fallow in early June and plots were sown on 9/5/79 at the rate of 36 pounds of seed per acre by split-packer grain drill of 16-inch row spacing.

Cheatgrass infestation was moderate in the varietal testing plots which required cultivation between rows twice in early spring to keep it under reasonable control. Never-the-less, enough infestation occurred within the platted rows to reduce the yield potential about 10 per cent.

The unusual volcanic ash helped to prevent excessive soil moisture loss by evaporation and the cool weather during late growing season were conducive to exceptionally high yield grain production. The precipitation for 1980 crop year was 17.2 inches as compared to the 38-year average of 14.6 inches at the McGregor Ranch.

The average yield of Jacmar grown on the McGregor Ranch of nearly 400 acres was 77.0 bushels per acre while the Gaines grown on the remaining portion of the Ranch averaged 52.5 bushels. Cheatgrass infestation plus foot rot infection and winter damage caused significant reduction of grain yield particularly for the Gaines variety.

PNW REGION	No.	CLASS	T.WT. lb/bu	Wheat Prot. (%)	1/ Flr. Yld. (%)	1/ Flr. Ash (%)	1/ Milling Score	1/ Flr. Prot.	2/ Flr. Color	2/ Farinograph Abs. Peak (%)	1/ Min.	2/ Min.	3/ Visc. (corr.)	3/ Cookie Dia. (cm)	3/ Cookie Dia. (cm)	Sponge* Cake (Vol) (cc)	Sponge* Cake Score (cc)	Noodle Yield (%)	Noodle Score
North Idaho	1	SWW	60.7	8.1	73.0	.44	83.6	6.9	79.0	54.2	1.4	2.0	42	8.84	8.83	1305	86.0	341	70
South Idaho	2	SWW	61.4	9.7	72.7	.42	84.4	7.9	81.3	55.3	1.0	1.6	44	9.16	9.26	1290	84.5	344	69
Palouse	3	SWW	61.1	8.1	72.7	.42	84.5	6.7	85.5	54.2	1.0	1.0	42	8.87	8.84	1225	79.0	340	78
Big Bend	4	SWW	61.4	8.9	73.2	.41	85.9	7.3	86.0	54.2	1.0	3.5	56	8.77	8.81	1260	82.0	344	79
Big Bend	4	Club	60.5	8.8	73.8	.38	88.6	7.4	88.0	51.9	1.0	2.5	45	9.09	9.12	1255	79.5	351	79
Walla Walla	5	SWW	61.3	8.7	72.4	.40	85.3	7.0	85.3	54.1	1.0	1.6	52	8.80	8.80	1215	80.0	333	75
North Pendleton	6	SWW	61.4	8.8	74.1	.39	88.4	7.2	88.0	54.0	1.0	1.0	41	8.70	8.72	1220	80.0	334	72
Columbia River	7	SWW	61.3	8.2	72.1	.38	86.1	6.8	91.0	53.4	1.0	1.0	36	8.91	8.89	1225	78.5	343	73
Columbia River	7	Club	60.2	7.2	73.0	.36	88.7	6.1	93.3	51.3	1.0	1.0	33	8.95	8.89	1270	80.0	340	74
Willamette Valley	8	SWW	58.2	9.0	68.9	.40	79.9	7.4	84.0	52.2	1.2	1.0	40	8.89	8.93	1205	76.0	331	73
Waterville	9	SWW	61.9	7.9	69.8	.37	83.1	6.7	89.3	53.5	1.2	2.8	41	9.16	9.13	1290	84.0	336	72
Waterville	9	Club	60.3	8.1	72.7	.38	87.1	6.9	88.0	51.0	1.0	1.0	33	9.16	9.16	1315	86.5	355	74
Horse Heaven	10	SWW	58.8	10.7	70.6	.46	78.7	8.7	80.0	55.8	1.0	2.7	78	8.39	8.57	1175	71.0	347	72
Blue Mountain	11	SWW	61.8	7.8	70.5	.42	81.1	6.9	85.3	54.1	1.0	2.0	43	8.64	8.63	1225	76.5	353	74

1/ 14% Moisture Basis

2/ Agtron Units

3/ Observed Values Corrected to 7% Protein.

* Japanese Sponge Cake and Udon Noodle.

COMMENTS: These milling and baking tests were done in co-operation with the PNW Grain Standards and Quality Committee and U.S. Wheat Associates. Samples are composites made from country elevator samplings during harvest representing 11 regions of Washington, Oregon, and Idaho soft white wheat production of 1981 crop. Overall quality for milling, cookie and sponge cake baking, and noodle making was good for most regions. The flour yield from region 8 (Willamette Valley) and 9 (Waterville) were below normal. Some shriveled kernels were observed from these locations.

NURSCO 11

FARM CITES-WA

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE
800257	MORO-SCHOESSLER-C	80A2022	CLUB	59.2	71.5	0.37	86.4	5.6	55.5	9.69	9.52	8L
800258	MORO-SCHOESSLER-H	80A2030	CLUB	59.1	71.6	0.41	84.9	5.9	55.3	8.99	8.84	5L
800259	DAWS-MANKE-C	80A2023	SWW	62.4	70.5	0.37	84.1	7.6	56.0	8.47	8.43	6L
800260	DAWS-MANKE-H	80A2031	SWW	61.9	70.5	0.39	82.3	8.7	57.3	8.45	8.53	4L
800261	MORO-HEINEMAN-C	80A2024	CLUB	61.0	73.4	0.37	88.8	8.0	57.0	8.86	8.86	2L
800262	MORO-HEINEMAN-H	80A2032	CLUB	55.3	66.6	0.41	74.4	11.6	56.3	8.39	8.64	2M
800263	DAWS-LANGENHEDER-C	80A2025	SWW	62.0	71.7	0.42	82.6	6.7	56.3	8.52	8.38	8L
800264	DAWS-LANGENHEDER-H	80A2033	SWW	62.3	73.9	0.45	84.8	8.3	56.8	8.31	8.35	3L
800265	DAWS-UNDEBERG-C	80A2026	SWW	61.9	71.0	0.41	82.4	6.2	57.8	8.45	8.25	8L
800266	DAWS-UNDEBERG-H	80A2034	SWW	62.2	72.9	0.45	82.9	7.2	55.8	8.39	8.30	8L
800267	MORO-SACKMAN-C	80A2027	CLUB	60.3	73.3	0.40	87.3	7.6	55.2	9.04	9.01	2L
800268	MORO-SACKMAN-H	80A2035	CLUB	62.0	74.4	0.43	87.3	10.7	54.0	8.56	8.75	1M
800269	STEPHENS-HYSLOP FARM-C	80A2040	SWW	60.4	72.0	0.46	81.2	7.7	55.4	8.55	8.52	2L
800270	STEPHENS-HYSLOP FARM-H	80A2041	SWW	58.5	72.9	0.42	84.1	7.9	54.8	8.66	8.65	2L
800271	UNKNOWN-KNODEL-C	80A2042	SWW	59.7	74.1	0.42	85.3	9.4	55.0	8.84	8.99	2M
800272	UNKNOWN-KNODEL-H	80A2043	SWW	60.9	73.9	0.45	84.7	11.6	56.9	8.71	9.11	1M
800273	UNKNOWN-FELLER-C	80A2044	SWW	62.7	75.1	0.47	85.3	9.8	56.4	8.67	8.87	2M
800274	UNKNOWN-FELLER-H	80A2045	SWW	62.2	75.5	0.47	85.5	8.7	56.2	8.69	8.76	2M
800275	UNKNOWN-FODE-C	80A2046	SWW	61.5	75.7	0.47	86.2	8.7	57.2	9.11	9.19	2M

FARM CITES-WA

NURSCO 12

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE
800276	UNKNOWN-FODE-H	80A2047	SWW	60.5	74.9	0.45	85.8	10.2	57.7	8.65	8.67	2M
800277	WANSER-HUDLOW-C	80A2028	HRW	64.2	73.1	0.43	86.3	10.6	62.7	8.04	8.09	3M
800278	WANSER-HUDLOW-H	80A2036	HRW	64.5	73.8	0.40	88.4	9.8	63.6	7.89	7.87	3M
800279	WANSER-SMICK-C	80A2029	HRW	63.7	73.6	0.40	88.2	10.5	63.9	7.76	7.80	3H
800280	WANSER-SMICK-H	80A2037	HRW	63.4	74.0	0.36	90.4	10.9	65.0	7.86	7.93	3H
800281	UNKNOWN-PNW G&F-C	80A2038	SWW	56.6	70.3	0.51	75.1	8.9	59.2	8.26	8.14	3M

NURSCO 13

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE	VISC	4/
					1/	1/	1/	1/	3/		4/			
800282	STEPHENS	C1017569	SWW	62.4	72.9	0.39	89.1	6.4	54.7	9.31	9.36	5L	33	24
800283	FARO	C1017590	CLUB	62.0	73.9	0.40	89.7	5.6	52.2	9.21	9.17	1L	29	48
800284	7C/MORO. OWW 68100-1M5. R 240	OR7954	5/CLUB	64.4	73.1	0.38	90.0	7.1	54.5	9.24	9.36	3L	40	21
800285	6720/PAHA. OWW 69068-1W5-OB. R-243	OR7955	SWW	62.4	71.0	0.39	86.7	6.5	55.5	8.90	8.95	6L	51	35
800286	DRC/68-23. OWW 68109-1M6. R241	OR7956	6/SWW	60.4	71.5	0.40	87.3	5.3	53.3	9.21	9.14	5L		
800287	INT/DIBO//DIBO/KKK. SWD70448-01W-1P-1H-OH	OR7957	HWW	61.6	70.3	0.41	84.6	6.7	57.3	8.79	8.84	5L		
800288	INTA66R/SAMBO/HNV11. SWD. 71220-01H-1H-OH.	OR7958	HRW	66.0	72.5	0.37	89.0	6.2	58.5	8.45	8.47	6L		
800289	BEZ/NAD//KIZ. SWD71437AO1H-1H-OP. R-162	OR7959	6/SRW	65.2	71.8	0.36	89.6	7.8	53.7	9.16	9.36	5L		
800290	6720/WA4995//6720/HYS. OWW69169-1W5. R-244	OR7961	6/SWW	62.0	72.6	0.39	88.7	5.6	55.3	9.22	9.18	5L		
800291	NORTENOM-67/YMH//6720-69-13. OWW71448-3-1	OR7962	5/SWW	62.4	73.1	0.37	90.6	6.1	55.8	9.30	9.31	5L		
800292	CROSS UNKNOWN. SMT74-30. R-268	OR7963	SWW	61.2	70.6	0.38	86.8	6.2	55.6	9.04	9.06	5L		
800293	SPRAGUE/WA5836. W-4000	OR7965	6/SWW	63.2	72.6	0.40	86.1	6.6	54.6	8.95	9.02	5L		
800294	LUKE/OR696. W-3220	OR7970	6/SWW	62.4	71.6	0.36	89.3	5.8	53.7	9.34	9.32	5L		
800295	HYS/YAYLA/63-112-66-41//OR7056. W3716	OR7973	6/SWW	62.0	72.1	0.39	88.0	5.6	54.5	9.20	9.16	5L		
800296	HYS/YAYLA/63-112-66-41/3/CERCO W-3442	OR7974	HWW	61.6	70.3	0.41	84.6	5.5	57.5	8.76	8.72	5L		
800297	OR69136/WA5829. W-4086	OR7976	6/SWW	63.6	72.7	0.39	88.8	6.1	53.0	9.15	9.16	2L		
800298	OR7065/HYSLOP. W4239	OR7982	6/SWW	62.0	73.3	0.41	88.3	5.8	53.3	9.47	9.45	5L		
800299	HYSLOP/YAYLA/63-112-66-41/OR69118. W4315	OR7983	SWW	61.2	70.7	0.42	84.4	5.9	55.6	9.19	9.18	5L		
800300	63-120-66-2	OR7987	SWW	63.2	71.5	0.43	84.8	6.6	54.3	9.35	9.42	5L		
800301	65-116-70W	OR7988	6/SWW	62.0	72.1	0.38	88.7	6.0	53.4	9.34	9.34	5L		
800302	CD/SEL. 101//55-1744/DC. K106	OR7992	6/SWW	63.2	71.7	0.39	87.5	5.9	54.6	9.21	9.20	5L		
800303	HYS/YAYLA/WA4995/3/CERCO. W-1980	OR7996	SWW	62.4	71.1	0.39	86.8	5.6	54.7	9.40	9.36	5L		
800304	RIEBESEL/REW. W-2147	OR7998	6/SWW	64.4	72.1	0.42	86.2	6.2	53.8	9.01	9.03	5L		

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 6% Protein.5/ Particularly Promising Overall Quality Characteristics.4/ Observed Values Corrected to 6% Protein.6/ Promising Overall Quality Characteristics.

COMMENTS: As a group this particular nursery has above normal milling properties (high flour yields and low flour ash).

Selection numbers OR7955, OR7963, OR7983, OR7987 and OR7996 were sufficiently below Stephens in flour yield to be considered questionable. Note that OR7957 and OR7974 are hard whites and OR7958 is a hard red winter.

Also, note OR7959 is a red seeded soft wheat with overall good properties.

NURSCO 14

SD, HV, MC, BZ, MT

H. MC NEAL

LABNUM	VARIETY	IDNO	CLASS	FPROT	BABS	MTIME	LVOL	LVOLC	BCRGR	MTYPE	RMKS
				1/				4/			
800305	FORTUNA (C1013596)	SD801	HRS	15.0	72.7	3.2	1283	1091	2	3H	SPRIN
800306		SD802	HRS	14.8	73.2	11.2	1220	1046	2	8H	
800307		SD803	HRS	15.0	73.1	6.3	1375	1189	3	6H	
800308		SD804	HRS	14.6	72.5	14.3	1330	1169	2	8H	
800309	FORTUNA (C1013596)	HV809	HRS	11.9	67.8	3.4	1115	1121	2	4H	SPRIN
800310		HV810	HRS	13.5	72.9	10.9	1210	1117	2	8H	
800311		HV811	HRS	12.8	69.7	6.8	1205	1155	2	6H	
800312		HV812	HRS	12.0	69.5	11.8	1100	1100	2	8H	
800313	FORTUNA (C1013596)	MC813	HRS	11.1	65.0	3.6	1010	1068	2	6M	SPRIN
800314		MC814	HRS	10.3	69.3	9.1	930	1035	4	8M	
800315		MC815	HRS	10.7	65.6	6.2	944	1025	4	8M	
800316		MC816	HRS	10.1	67.0	8.0	966	1084	2	8M	
800317	WINALTA (C1013670)	BZ901	HRW	11.8	66.9	2.9	1125	1137	2	4H	WINT
800318		BZ902	HRW	11.6	66.9	2.4	1005	1030	2	3H	
800319		BZ903	HRW	10.0	66.2	2.4	954	1078	2	2H	
800320		BZ904	HRW	11.4	65.6	2.0	1080	1117	4	2H	
800321	WINALTA (C1013670)	HV905	HRW	9.8	64.2	4.9	1050	1186	2	8M	WINT
800322		HV906	HRW	10.1	64.6	4.1	896	1014	6	7M	
800323		HV907	HRW	8.8	63.6	4.7	830	1028	6	8M	
800324	WINALTA (C1013670)	MC909	HRW	10.4	70.9	4.3	1148	1247	2	5H	WINT
800325		MC910	HRW	13.9	71.3	3.6	1028	910	2	4H	
800326		MC911	HRW	12.6	70.2	3.7	1045	1008	2	4H	
800327		MC912	HRW	10.2	66.8	1.9	1050	1162	6	2H	

COMMENTS: Evaluated in co-operation with the Montana Wheat Quality Council. SD, HV, MC, BZ are Sidney, Havre, Mocassin and Bozeman, MT.

SD802 - Very long and strong mixing - poorer than Fortuna; SD803 - Equal or better than Fortuna; SD804 - Extremely long mixing - much poorer than Fortuna.
HV810 - Extremely long mixing - poorer than Fortuna; HV811 - Equal or better overall than Fortuna; HV812 - Extremely long mixing - poorer overall than Fortuna.
MC814 - Long mixing and low loaf volume - poorer than Fortuna; MC815 - Slightly poorer overall in baking than Fortuna; MC816 - Slightly poorer overall in baking than Fortuna.
BZ902 - Similar and equal to Winolta; BZ903 - Slightly poorer overall than Winolta; BZ904 - Short mixing and poorer overall than Winolta.

HV906 - Slightly low in loaf volume and poorer than Winolta; HV907 - Low loaf volume and poorer than Winolta.
MC910 - Similar overall to Winolta; MC911 - Similar overall to Winolta; MC912 - Short mixing and poorer than Winolta.

LABNUM	VARIETY	IDNO	CLASS	FASH <u>1/</u>	FPROT <u>1/</u>	MABSC <u>3/</u>	MTYPE	BABS	BABSC <u>3/</u>	MTIME	LVOL	LVOLC <u>4/</u>	BCRGR
800328	KANSAS (CONTROL)	80-716	HRW	0.45	12.9	63.1	4H	65.4	64.5	3.8	1168	1112	2
800329		80-717	HRW	0.49	12.7	61.5	6H	63.6	62.9	5.0	1270	1227	2
800330		80-718	HRW	0.44	12.6	63.9	5H	65.9	65.3	4.6	1233	1196	2
800331		80-719	HRW	0.44	9.8	60.9	8M	61.1	63.3	6.3	1100	1236	2
800332	SCHRAEDER (CONTROL)	80-720	HRW	0.41	11.4	62.5	6M	63.3	63.9	4.8	1117	1154	1
800333		80-721	HRW	0.44	12.5	65.2	5H	67.1	66.6	5.1	1140	1109	1
800334		80-722	HRW	0.46	11.7	61.0	6H	62.1	62.4	4.8	1215	1234	1
800335		80-723	HRW	0.48	11.7	63.2	7H	64.8	65.1	7.8	1215	1234	2
800336	COLORADO (CONTROL)	80-724	HRW	0.50	12.2	62.8	7H	65.4	65.2	7.8	1150	1138	2
800337		80-725	HRW	0.45	12.9	64.6	7H	68.9	68.0	6.9	1230	1174	3
800338		80-726	HRW	0.40	12.6	67.5	4H	69.5	68.9	3.2	1137	1100	2
800339		80-727	HRW	0.45	13.4	66.2	3H	69.0	67.6	3.0	1200	1113	2
800340	SOUTH DAKOTA (CONTROL)	80-728	HRW	0.44	12.1	65.7	5H	67.2	67.1	4.1	1100	1094	2

1/ Observed Values Corrected to 14% Moisture Basis.5/ Particularly Promising Overall Quality Characteristics.3/ Absorption at 14% Moisture Corrected to 12% Protein.6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 12% Protein.

COMMENTS: The flour samples were baked in co-operation with the Hard Winter Wheat Quality Council test. No milling data is available to report. The identification of all samples were coded.

NURSCO 16

MT

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS	BABSC
800341	HRW - TETON COUNTY		HRW	64.4	71.7	0.45	85.8	11.8	63.0	5H	66.2	65.4
800342	HRW - CHOUTEAU COUNTY		HRW	63.6	71.9	0.47	82.6	11.0	62.7	5H	65.1	65.1
800343	HRS - BLAIN COUNTY		HRW	63.2	70.0	0.44	81.2	9.3	62.1	8M	63.8	65.5

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

NURSCO 16

MT

PNW GRAIN STD'S & QUALITY - CONT'D

LABNUM	VARIETY	IDNO	CLASS	MTIME	LVOL	LVOLC	BCRGR	FABS	FABSC	FPEAK	FSTAB
800341	HRW - TETON COUNTY		HRW	4.4	1100	1050	2	58.8	58.0	8.0	13.0
800342	HRW - CHOUTEAU COUNTY		HRW	4.0	1060	1060	2	59.0	59.0	7.5	7.5
800343	HRS - BLAIN COUNTY		HRW	7.5	796	901	6	59.3	61.0	1.5	7.5

NURSCO 17

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
800344	HATTON	C1017772	HRW	64.0	70.5	0.41	81.9	9.7	62.9	4H
800345	N7200192/CARDON	N7800201	HRW	62.2	68.0	0.38	79.8	10.6	64.4	4H
800346	N7200192/CARDON	WA6818	HRW 6/	62.5	69.6	0.38	82.3	10.3	64.8	4H
800347	N7200192/CARDON	N78-205	HRW 6/	62.6	69.7	0.41	81.4	10.5	64.3	4H
800348	N7200192/CARDON	N78-207	HRW	62.1	67.7	0.38	79.0	10.5	64.3	4H
800349	WA5840/CERCO	WA6817	HRW	61.3	70.8	0.42	82.2	9.4	64.4	7M
800350	WA5840/CERCO	N78-1004	HRW	63.0	69.2	0.41	80.6	9.9	64.3	8M
800351	1D5012/WA5866	WA6816	HRW 6/	62.3	71.6	0.40	84.1	8.9	63.9	3M
800352	WA5840/KAVKAZ	N78-1601	HRW	62.5	68.7	0.42	78.6	11.3	62.1	2H
800353	WA5840/KAVKAZ	N78-1603	HRW	62.6	68.6	0.42	78.5	10.9	66.1	3H
800354	286011/CARDON	N78-2201	HRW 5/	62.4	73.0	0.40	86.1	10.3	66.0	3H
800355	CERCO/17271	N78-2401	HRW 6/	62.7	69.9	0.44	79.6	10.3	64.5	3H
800356	K7105030/WA5938	N78-2901	HRW	62.1	73.0	0.42	86.9	9.5	62.3	4M
800357	N72-27/N67-42	WA-6815	HRW 6/	61.9	71.0	0.40	83.4	11.1	65.3	3H

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein.4/ Observed Values Corrected to 10% Protein.5/

Particularly Promising Overall Quality Characteristics.

6/

Promising Overall Quality Characteristics.

COMMENTS:

Several of the selections (N7800201, N78-207, N78-1601 and N78-1603) were low in flour yield. Selections WA6817, N78-1004 and N78-2901 are low in loaf volume and/or poor crumb grain.

NURSCO 17

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR
					<u>3/</u>			<u>4/</u>	
800344	HATTON	C1017772	HRW	64.0	64.3	2.9	955	974	4
800345	N7200192/CARDON	N7800201	HRW	66.4	65.8	3.5	980	943	2
800346	N7200192/CARDON	WA6818	HRW	66.5	66.2	3.2	965	946	2
800347	N7200192/CARDON	N78-205	HRW	66.2	65.7	3.2	1000	969	2
800348	N7200192/CARDON	N78-207	HRW	67.2	66.7	3.3	1020	989	3
800349	WA5840/CERCO	WA6817	HRW	66.2	66.8	4.3	825	862	5
800350	WA5840/CERCO	N78-1004	HRW	67.6	67.7	4.8	925	931	2
800351	ID5012/WA5866	WA6816	HRW	64.2	65.3	2.7	880	948	2
800352	WA5840/KAVKAZ	N78-1601	HRW	64.8	63.5	1.8	955	874	2
800353	WA5840/KAVKAZ	N78-1603	HRW	68.4	67.5	2.7	1000	944	2
800354	286011/CARDON	N78-2201	HRW	67.7	67.4	2.5	1010	991	2
800355	CERCO/17271	N78-2401	HRW	66.2	65.9	2.8	1005	986	2
800356	K7105030/WA5938	N78-2901	HRW	63.2	63.7	2.5	905	936	4
800357	N72-27/N67-42	WA-6815	HRW	66.8	65.7	2.0	1025	957	2

NURSCO 18

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
800358	HATTON	C1017772	HRW	64.4	73.1	0.40	85.5	9.5	64.7	4H
800359	N7000132/C117271	N79-1603	HRW	64.0	70.7	0.43	81.8	10.0	64.8	5H
800360	N7000149/N7000163	N79-3404	HRW	62.8	70.3	0.40	82.3	10.5	63.2	3H
800361	N7000149/N7000163	N79-3405	HRW	63.3	70.6	0.40	82.7	10.4	63.1	3H
800362	K73046/N7200026	N79-3501	HRW	63.6	71.1	0.38	84.5	10.3	64.8	5H
800363	KAVKAZ SEL.	N79-3601	HRW	62.6	68.9	0.40	80.2	10.5	63.7	3H
800364	KAVKAZ/WA5836	N79-3901	HRW	62.3	72.7	0.38	87.2	9.8	63.9	3H
800365	K7100239/K7100920	N79-4301	HRW	62.5	67.5	0.39	78.7	9.3	64.3	3H
800366	K7100239/K7100920	N79-4302	HRW	63.0	73.7	0.39	87.4	9.8	63.5	3H
800367	K73046/N7200026	N79-4503	HRW	62.5	68.6	0.39	79.4	9.9	63.8	3H
800368	KAVKAZ/ID5011	N79-4702	HRW	63.0	72.8	0.39	86.5	9.8	63.2	6M
800369	KAVKAZ/ID5011	N79-4703	HRW	63.7	72.3	0.38	86.2	10.0	62.9	6M
800370	KAVKAZ/ID5011	N79-4704	HRW	63.1	71.2	0.39	84.0	10.6	62.5	2H
800371	K73044/N73046	N79-5001	HRW	63.6	70.6	0.39	82.1	10.3	65.5	5H
800372	N73101/N7106074	N79-5202	HRW	63.6	69.3	0.40	81.1	9.8	64.8	5H
800373	N7107028/C0696317	N79-5901	HRW	63.8	69.2	0.41	80.6	9.0	65.1	5H

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein. 5/ Particularly Promising Overall Quality Characteristics.4/ Observed Values Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.

COMMENTS: Selections N79-1603, N79-3404, N79-3601, N79-3405, N79-4503, N79-5001, N79-5202 and N79-5901 are significantly poorer in milling quality than Hatton. Selections N79-4702, N79-4703 and N79-4704 are very poor in baking properties.

NURSCO 18

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
800358 HATTON		C1017772	HRW	66.1	66.6	4.0	940	971	2
800359 N7000132/C117271		N79-1603	HRW	67.2	67.2	4.7	1040	1040	2
800360 N7000149/N7000163		N79-3404	HRW	66.1	65.6	3.6	955	924	4
800361 N7000149/N7000163		N79-3405	HRW	65.9	65.5	3.3	955	930	4
800362 K73046/N7200026		N79-3501	HRW	67.5	67.2	4.4	960	941	2
800363 KAVKAZ SEL.		N79-3601	HRW	66.6	66.1	3.4	930	899	3
800364 KAVKAZ/WA5836		N79-3901	HRW	66.1	66.3	4.3	970	982	2
800365 K7100239/K7100920		N79-4301	HRW	66.0	66.7	4.5	1000	1043	4
800366 K7100239/K7100920		N79-4302	HRW	64.7	64.9	3.6	1020	1032	2
800367 K73046/N7200026		N79-4503	HRW	65.1	65.2	3.9	985	991	4
800368 KAVKAZ/ID5011		N79-4702	HRW	65.4	65.6	3.8	905	917	8
800369 KAVKAZ/ID5011		N79-4703	HRW	64.8	64.8	3.4	855	855	6
800370 KAVKAZ/ID5011		N79-4704	HRW	65.5	64.9	2.5	840	803	8
800371 K73044/N73046		N79-5001	HRW	69.7	69.4	6.3	965	946	2
800372 N73101/N7106074		N79-5202	HRW	67.5	67.7	5.0	998	1010	4
800373 N7107028/C0696317		N79-5901	HRW	66.5	67.5	4.2	990	1052	3

NURSCO 19

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
800374	HATTON	C1017772	HRW	64.5	74.2	0.40	88.1	9.2	63.1	6M
800375	K7100255/K7101537	N79-201	HRW	61.8	71.1	0.42	82.2	10.3	63.9	6M
800376	K7100255/K7101537	N79-202	HRW	62.6	72.0	0.38	85.9	10.3	63.1	6M
800377	K7100255/K7101537	N79-203	HRW	62.6	69.7	0.38	82.8	10.3	63.2	6M
800378	KAVKAZ/C117271	N79-401	HRW	61.7	70.6	0.39	83.4	12.4	64.9	4H
800379	KAVKAZ/C117271	N79-403	HRW	61.6	71.0	0.40	83.2	12.0	64.7	5H
800380	P1181268/GAINES//VH072618	N79-601	HRW	62.7	71.9	0.40	84.5	10.0	65.0	5H
800381	CARDON/N7106043	N79-702	HRW	62.2	70.5	0.42	81.6	9.7	63.5	6M
800382	K7100239/K7100859	N79-901	HRW	62.7	70.8	0.43	81.6	10.2	63.8	4H
800383	KAVKAZ/K7100796	N79-1001	HRW	61.3	72.8	0.39	85.8	11.3	64.7	4H
800384	WA5836/KAVKAZ	N79-1101	HRW	61.8	70.5	0.41	82.2	10.6	62.2	4M
800385	N7000132/C117271	N79-1601	HRW	61.5	71.1	0.40	83.6	10.4	62.2	4M
800386	K73082/N7200021	N79-1701	HRW	61.7	70.7	0.41	82.3	10.1	63.5	4M
800387	K73055/N7200026	N79-1801	HRW	62.3	71.0	0.41	83.0	10.3	62.9	6M
800388	K73055/N7200026	N79-1802	HRW	61.9	70.2	0.41	81.2	10.4	62.7	4M
800389	N73101/CARDON	N79-1902	HRW	62.8	70.7	0.41	82.1	10.6	63.4	3M
800390	K7100255/K7101744	N79-2101	HRW	62.8	72.2	0.42	83.6	10.2	62.0	6M
800391	K73061/N7200021	N79-2301	HRW	62.2	69.5	0.40	80.5	9.9	63.4	4M
800392	VH067467/1D000044	N79-2501	HRW	62.5	71.9	0.40	84.8	10.6	64.3	4M
800393	K7100239/K7100743	N79-2901	HRW	62.2	70.6	0.40	83.1	9.7	62.0	8L
800394	K7100239/K7100743	N79-2902	HRW	62.3	68.8	0.40	79.7	10.6	63.8	5H
800395	WA5836/CERCO	N79-3301	HRW	62.3	70.3	0.44	80.6	11.0	63.5	4M
800396	WA5836/CERCO	N79-3302	HRW	61.3	69.8	0.41	81.6	10.3	63.7	7M
800397	UT646001/K7100255	N79-6301	HRW	62.7	68.8	0.40	79.9	11.0	64.2	3H

- 1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.
3/ Absorption at 14% Moisture Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.
4/ Observed Values Corrected to 10% Protein.

COMMENTS: None of the selections were equal to Hatton in overall quality (both milling and baking). They were either low in flour yield (and milling score) or low in loaf volume. The following selections were equal to Hatton in baking performance: N79-702, N79-901, N79-2501, and N79-3301. The following selections were the best in milling quality: N79-202, N79-601, N79-1001, N79-2101, and N79-2501. All others had neither acceptable milling or baking. The KAVKAZ selections were significantly higher in protein content.

LIND, WA

E. DONALDSON

NURSCO 19

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
800374	HATTON	C1017772	HRW	66.5	67.3	2.8	925	975	2
800375	K7100255/K7101537	N79-201	HRW	68.4	68.1	4.3	945	926	2
800376	K7100255/K7101537	N79-202	HRW	67.6	67.3	3.9	909	890	2
800377	K7100255/K7101537	N79-203	HRW	67.7	67.4	3.3	911	892	2
800378	KAVKAZ/C117271	N79-401	HRW	71.5	69.1	4.3	1002	853	2
800379	KAVKAZ/C117271	N79-403	HRW	70.9	68.9	3.8	1030	906	2
800380	P1181268/GAINES//VH072618	N79-601	HRW	69.2	69.2	4.6	901	901	2
800381	CARDON/N7106043	N79-702	HRW	67.4	67.7	3.8	942	961	2
800382	K7100239/K7100859	N79-901	HRW	68.2	68.0	3.3	1025	1013	2
800383	KAVKAZ/K7100796	N79-1001	HRW	70.2	68.9	3.6	993	912	2
800384	WA5836/KAVKAZ	N79-1101	HRW	67.0	66.4	3.5	955	918	4
800385	N7000132/C117271	N79-1601	HRW	66.8	66.4	2.8	925	900	2
800386	K73082/N7200021	N79-1701	HRW	67.8	67.7	2.9	938	932	3
800387	K73055/N7200026	N79-1801	HRW	67.4	67.1	3.2	910	891	2
800388	K73055/N7200026	N79-1802	HRW	67.3	66.9	2.8	858	833	4
800389	N73101/CARDON	N79-1902	HRW	68.2	67.6	2.6	950	913	4
800390	K7100255/K7101744	N79-2101	HRW	66.4	66.2	4.0	879	867	4
800391	K73061/N7200021	N79-2301	HRW	67.5	67.6	3.4	890	896	5
800392	VH067467/ID000044	N79-2501	HRW	69.1	68.5	3.5	987	950	2
800393	K7100239/K7100743	N79-2901	HRW	65.9	66.2	6.0	906	925	3
800394	K7100239/K7100743	N79-2902	HRW	68.6	68.0	5.0	955	918	2
800395	WA5836/CERCO	N79-3301	HRW	68.7	67.7	3.0	1010	948	2
800396	WA5836/CERCO	N79-3302	HRW	68.2	67.9	3.6	890	871	2
800397	UT646001/K7100255	N79-6301	HRW	69.4	68.4	3.1	924	862	2

NURSCO 21

MORO, OR

F.A. CHOLICK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
800409	WANSSER C1013844 (KASHR)	HRAYT 1	HRW	64.0	70.4	0.37	86.3	8.0	58.9	8L
800410	SWO 730902 F-1H-1P-OP (MORO)	HRAYT 59	HRW	64.8	66.4	0.39	81.3	5.8	61.8	8L
800411	SWCM 5092-7D-1P-1H-1P-OP (MORO)	HRAYT 5	HRW	64.8	72.2	0.39	87.4	7.9	60.4	6L
800412	SWD 71452A-03H-2H-OP (MORO)	HRAYT 12	HRW	62.8	71.0	0.39	86.1	7.0	59.5	8L
800413	SWO 730902F-1H-1P-OP (MORO)	HRAYT 17	HRW	62.8	68.8	0.37	84.9	7.7	58.0	2M
800414	SWH 72319-1H-2P-1H-H (MORO)	HRAYT 22	HRW	64.0	71.6	0.41	85.6	8.5	56.7	4L
800415	SWH 72319-1H-2P-2H-H (MORO)	HRAYT 23	HRW	64.4	72.0	0.38	87.9	8.2	56.9	3L
800416	SWD 71164-03H-1P-3HP (MORO)	HRAYT 24 5/	HRW	64.4	71.7	0.40	86.5	9.6	57.7	4M
800417	SWD 71220-01H-1H-OH (MORO)	ABYTA 29	HRW	64.4	71.3	0.40	86.0	7.5	59.0	6L
800418	SWM 730865*-6H-2P-2H-OP (MORO)	HRAYT 79 6/	HRW	62.4	70.6	0.40	85.2	10.2	59.1	8M
800419	OWW 73210C-04H-2H-2H-OP (MORO)	HRAYT 87	SWW	64.0	71.3	0.36	88.8	10.0	53.1	5L

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PULLMAN, WA.

MORO HARD RED WINTER

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NURSCO 21

MORO, OR

F.A. CHOLICK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
800409	WANSSER C1013844 (KASHR)	HRAYT 1	HRW	62.3	62.3	4.9	805	805	5
800410	SWO 730902 F-1H-1P-OP (MORO)	HRAYT 59	HRW	61.0	63.2	4.0	435	571	
800411	SWCM 5092-7D-1P-1H-1P-OP (MORO)	HRAYT 5	HRW	61.7	61.8	4.5	660	666	6
800412	SWD 71452A-03H-2H-OP (MORO)	HRAYT 12	HRW	60.9	61.9	6.2	625	687	6
800413	SWO 730902F-1H-1P-OP (MORO)	HRAYT 17	HRW	59.1	59.4	2.2	590	609	9
800414	SWH 72319-1H-2P-1H-H (MORO)	HRAYT 22	HRW	59.6	59.1	4.3	680	649	8
800415	SWH 72319-1H-2P-2H-H (MORO)	HRAYT 23	HRW	60.5	60.3	3.8	805	793	5
800416	SWD 71164-03H-1P-3HP (MORO)	HRAYT 24	HRW	63.2	61.6	2.8	923	824	1
800417	SWD 71220-01H-1H-OH (MORO)	ABYTA 29	HRW	61.9	62.4	4.3	640	671	8
800418	SWM 730865*-6H-2P-2H-OP (MORO)	HRAYT 79	HRW	65.7	63.5	5.3	913	777	1
800419	OWW 73210C-04H-2H-2H-OP (MORO)	HRAYT 87	SWW	56.5	54.5	3.6	785	665	4

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 8% Protein.

COMMENTS: The baking quality of all selections except HRAYT-24 and HRAYT-79 were very poor. Breads were low in volume and heavy crumb grain. Milling quality of many however were equal to or better than Wanser. The protein level was extremely low for good meaningful results.

NURSCO 22

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI
800420	DAWS (C1017419)	ABYTA-13	SWW	54.8	69.4	0.47	80.2	8.3	54.7	8.72
800421	STEPHENS (C1017596)	ABYTA-3	SWW	57.6	71.9	0.43	85.9	8.0	53.6	8.95
800422	SWD 69282-02D-1H-1H-OH	ABYTA-22	HRW	58.0	70.2	0.45	83.0	8.9	59.4	8.52
800423	OWW 71214-2-11E4	ABYTA-43	6/ SWW	55.2	71.1	0.46	82.9	8.5	57.4	9.01
800424	OWW 71224-2-3CB-02W5	ABYTA-44	5/ SWW	58.0	71.7	0.41	86.9	8.3	54.2	9.24
800425	OWW 71412-2-4W4-01W4	ABYTA-53	SWW	51.2	65.2	0.47	79.8	9.0	55.3	8.60
800426	OWW 71427-3-05W4	ABYTA-55	SWW	56.8	67.2	0.41	80.3	8.9	58.1	9.27
800427	OWW 71427-3-16W4	ABYTA-56	6/ SWW	58.8	70.0	0.42	83.7	8.5	56.1	9.13
800428	OWW 71730-2-01W4	ABYTA-64	5/ SWW	58.8	70.6	0.38	86.9	7.6	56.7	9.32
800429	OWW 71903-07W4	ABYTA-65	6/ SWW	60.0	68.0	0.40	82.4	9.2	58.5	8.92
800430	SWD 730899A-3H-1H-OP	ABYTA-73	HWW	57.6	64.9	0.39	79.8	9.1	63.1	8.40
800431	OWW 73190D-03H-2H-P	ABYTA-90	SWW	51.6	61.9	0.46	70.4	9.8	59.8	8.58
800432	OWW 72399-2-01-2S-P	ABYTA-99	SWW	56.8	65.8	0.44	76.6	8.5	58.1	8.93
800433	OWW 72409-3-09-1S-P	ABYTA-102	SWW	54.4	63.7	0.42	75.7	8.7	56.4	8.97
800434	SWD 71340-08H-07H-1P-OP	ABYTA-120	6/ SWW	60.0	69.5	0.38	85.3	8.1	57.4	8.88

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

4/ Observed Values Corrected to 9% Protein.

COMMENTS: Two of the selections were hard endosperm wheat (ABYTA-22 and ABYTA-73). Neither however made satisfactory bread. Test weights of the whole group were low, which may have influenced the poor performance in milling.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 22

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	CODIC 4/	MTYPE	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
800420	DAWS (C1017419)	ABYTA-13	SWW	8.64	3L				0	
800421	STEPHENS (C1017596)	ABYTA-3	SWW	8.84	2L				0	
800422	SWD 69282-02D-1H-1H-OH	ABYTA-22	HRW	8.51	8M	61.8	5.0	700	706	9
800423	OWW 71214-2-11E4	ABYTA-43	SWW	8.97	3L	57.8	2.9	810	841	8
800424	OWW 71224-2-3CB-02W5	ABYTA-44	SWW	9.16	2L				0	
800425	OWW 71412-2-4W4-01W4	ABYTA-53	SWW	8.60	3M				0	
800426	OWW 71427-3-05W4	ABYTA-55	SWW	9.26	3L				0	
800427	OWW 71427-3-16W4	ABYTA-56	SWW	9.08	3L				0	
800428	OWW 71730-2-01W4	ABYTA-64	SWW	9.17	2L				0	
800429	OWW 71903-07W4	ABYTA-65	SWW	8.94	4M				0	
800430	SWO 730899A-3H-1H-OP	ABYTA-73	HWW	8.41	4M	65.5	2.7	795	789	8
800431	OWW 73190D-03H-2H-P	ABYTA-90	SWW	8.67	2M				0	
800432	OWW 72399-2-01-2S-P	ABYTA-99	SWW	8.88	3M				0	
800433	OWW 72409-3-09-1S-P	ABYTA-102	SWW	8.94	3L				0	
800434	SWD 71340-08H-07H-1P-OP	ABYTA-120	SWW	8.78	3L				0	

NURSCO 23

CORVALLIS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
800435	HYSLOP (C1014564)	ELITE 1	SWW	55.2	68.0	0.48	77.3	8.8	56.4	8.84	8.93	3M
800436	STEPHENS (C1017569)	ELITE 4	SWW	57.2	69.7	0.44	81.9	8.1	57.6	9.07	9.09	2M
800437	OWM 68007-1M6	ELITE 116/	SWW	57.2	68.3	0.49	77.1	8.3	57.5	8.74	8.77	2M
800438	3WM 68007-2M6	ELITE 125/	SWW	58.8	71.7	0.46	83.1	8.1	56.2	8.87	8.89	2M
800439	OWM 71213-4-02E4	ELITE 16	SWW	54.0	67.1	0.47	76.8	8.0	56.3	8.94	8.94	2M
800440	OWM 71439-1-2W4-02W4	ELITE 205/	SWW	58.0	69.0	0.40	83.7	8.3	56.3	9.04	9.08	3L
800441	OWM 72339-2-01-1-OS	ELITE 22	SWW	51.6	66.2	0.45	76.8	8.9	56.3	8.53	8.63	3M
800442	OWM 72341-2-01-2H-OP	ELITE 235/	SWW	56.8	69.9	0.43	82.8	7.9	56.8	9.03	9.02	3M
800443	OWM 72342-2-04-1-OS	ELITE 24	SWW	56.0	66.8	0.43	78.9	8.6	58.2	8.51	8.57	2L
800444	OWM 71214-2-12W4	ABYTA 246/	SWW	56.8	68.9	0.45	80.0	8.2	57.4	8.76	8.78	6L
800445	C588-5E-04W5	ABYTA 316/	SWW	55.6	67.6	0.37	83.4	8.4	56.9	8.82	8.86	2M
800446	OWM 71310-1-12E4	ELITE 336/	SWW	54.4	67.7	0.44	79.6	7.7	56.8	8.94	8.91	4L
800447	OWM 70094-2-07W5	ABYTA 355/	SWW	56.4	72.1	0.47	82.7	8.0	54.6	9.16	9.16	2L
800448	OWM 71903-08W4	ABYTA 665/	SWW	60.4	72.7	0.47	83.7	9.2	56.9	8.71	8.84	4M
800449	OWM 72338-1-01-3H-OP	ABYTA 675/	SWW	59.6	72.5	0.47	83.7	8.3	56.5	8.87	8.91	3M
800450	SWO 731034C-2H-1H-S	ABYTA 745/	SWW	62.8	68.6	0.37	84.6	9.7	57.6	8.80	8.99	3M
800451	SWH 72053-5H-2H-2H-P	ABYTA 786/	SWW	56.4	71.6	0.46	82.8	8.0	56.5	8.71	8.71	2M
800452	SWO 731112C-1P-2P-OP	ABYTA 116	5SWW	62.0	71.3	0.46	82.9	8.7	56.3	8.94	9.01	2M

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 8% Protein.4/ Observed Values Corrected to 8% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS: Test weights of the entire nursery were low with the exception of ABYTA 74 and 116. This influenced the flour yield and milling score as reflected in Hyslop and Stephens. Ratings were made relative to the checks.

NURSCO 24

CORVALLIS, OR

F.A. CHOLICK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
800453	SWD 71452A-03H-2H-OP	HRAYT 12	HRW	62.4	70.9	0.43	84.1	8.0	62.9	6L
800454	SWO 730902F-1H-1P-OP	HRAYT 17	HRW	63.6	70.5	0.41	84.7	9.5	61.4	2M
800455	SWH 72319-1H-2P-1H-H	HRAYT 22	HRW	64.8	72.4	0.40	87.0	11.4	59.6	4M
800456	SWH 72319-1H-2P-2H-H	HRAYT 23	HRW	64.4	71.9	0.40	86.6	11.2	60.0	3M
800457	SWD 71164-03H-1P-3HP	HRAYT 24	HRW	64.8	72.1	0.41	86.1	11.5	62.2	3M
800458	SWD 71220-01H-1H-OH	ABYTA 29	HRW	64.0	70.0	0.41	84.0	9.1	61.4	4M
800459	CH2672-2C-3C-1C-1D	ELITE 46	HRW	62.8	66.3	0.32	85.0	9.4	62.0	4L
800460	SWD 730902F-1H-2H-OP	ELITE 47	HRW	62.8	69.7	0.37	85.8	9.0	61.1	2M
800461	SWO 730902F-1H-1P-1H-OP	HRAYT 59	HRW	62.8	70.6	0.38	86.5	9.6	60.4	2M
800462	SWM 730865*-6H-2P-2H-OP	HRAYT 79	HRW	64.4	71.5	0.32	90.4	10.8	63.4	6M
800463	OWW 73210C-04H-2H-2H-OP	HRAYT 87	SRW	63.6	70.8	0.41	85.4	10.5	56.8	3L

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein. 5/ Particularly Promising Overall Quality Characteristics.4/ Observed Values Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.

COMMENTS: The nursery was submitted without a check variety for a reference, however, only three selections stand out as promising in bread baking performance by normal standards. These are footnoted. All others are deficient in loaf volume and/or grain.

NURSCO 24

CORVALLIS, OR

F.A. CHOLICK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
800453	SWD 71452A-03H-2H-OP	HRAYT 12	HRW	63.3	65.3	3.5	750	874	4
800454	SWO 730902F-1H-1P-OP	HRAYT 17	HRW	63.3	63.8	1.9	730	761	5
800455	SWH 72319-1H-2P-1H-H	HRAYT 22	HRW	63.4	62.0	3.2	870	783	3
800456	SWH 72319-1H-2P-2H-H	HRAYT 23	HRW	63.6	62.4	2.7	850	776	3
800457	SWD 71164-03H-1P-3HP	HRAYT 24 <u>6/</u>	HRW	65.1	63.6	1.6	1000	907	2
800458	SWD 71220-01H-1H-OH	ABYTA 29	HRW	61.9	62.8	2.4	815	871	4
800459	CH2672-2C-3C-1C-1D	ELITE 46 <u>6/</u>	HRW	62.8	63.4	3.4	875	912	2
800460	SWD 730902F-1H-2H-OP	ELITE 47	HRW	61.5	62.5	1.6	705	767	8
800461	SWO 730902F-1H-1P-1H-OP	HRAYT 59	HRW	61.4	61.8	1.5	755	780	7
800462	SWM 730865*-6H-2P-2H-OP	HRAYT 79 <u>6/</u>	HRW	65.6	64.8	3.5	985	935	2
800463	OWW 73210C-04H-2H-2H-OP	HRAYT 87	SRW	59.0	58.5	2.5	890	860	3

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH		MSCOR	FPROT	MABSC		CODI	CODIC	MTYPE
						1/				3/			4/	
800464	NUGAINES (C1013968)	ELITE 7	SWW	64.8	70.0	0.36		87.6	7.6	57.7		8.86	8.82	4M
800465	STEPHENS (C1017569)	ELITE 4	SWW	60.4	70.4	0.37		87.3	8.3	57.2		9.01	9.05	3M
800466	FARO (C1017590)	ELITE 8	CLUB	60.8	72.1	0.41		86.7	7.8	54.2		9.05	9.03	3L
800467	JACMAR	ELITE 9	CLUB	60.4	71.8	0.41		86.2	8.1	54.9		9.28	9.29	3L
800468	OWW 68007-1M6	ELITE 11	SWW	62.4	70.5	0.41		84.5	7.9	55.7		9.02	9.01	6L
800469	3WW 68007-2M6	ELITE 12	5/ SWW	62.0	72.5	0.38		89.0	8.7	55.6		9.04	9.11	2L
800470	OWW 71213-4-02E4	ELITE 16	SWW	59.2	69.7	0.39		85.1	8.8	54.3		9.02	9.11	3L
800471	OWW 72339-2-01-1-OS	ELITE 22	SWW	59.2	68.1	0.40		82.0	9.7	54.5		8.85	9.04	2M
800472	OWW 71214-2-12W4	ABYTA 24	5/ SWW	63.6	73.5	0.38		90.5	7.2	54.0		9.14	9.06	6L
800473	OWW 72393-4-03-OS	ELITE 25	5/ SWW	60.8	71.1	0.37		88.1	8.1	54.9		9.09	9.10	5L
800474	C588-5E-04W5	ABYTA 31	5/ SWW	62.0	70.3	0.37		87.2	8.2	55.1		9.05	9.07	2M
800475	OWW 70094-2-07W5	ABYTA 35	5/ SWW	62.4	73.4	0.36		91.9	7.0	53.8		9.38	9.27	5L
800476	OWW 71445-1-2W4	ELITE 42	SWW	61.6	72.1	0.41		87.0	7.0	58.2		8.36	8.25	5M
800477	OWW 71623-7-02E4	ELITE 43	6/ SWW	62.4	71.7	0.36		89.2	6.3	56.9		8.91	8.73	5L
800478	OWW 71427-3-16W4-03W4	ABYTA 60	6/ SWW	61.2	71.2	0.40		86.1	8.1	55.7		8.92	8.94	4L
800479	OWW 71903-08W4	ABYTA 66	5/ SWW	63.6	73.1	0.37		90.7	7.7	55.4		9.09	9.05	6L
800480	SWO 731034C-2H-1H-S	ABYTA 74	6/ SWW	64.0	70.7	0.41		85.2	8.2	54.9		8.92	8.95	2L
800481	SWH 72053-5H-2H-2H-P	ABYTA 78	5/ SWW	63.6	73.4	0.39		89.4	6.0	55.6		9.04	8.82	2L
800482	OWW 72341-2-01-2H-OP	ELITE 24	6/ SWW	60.0	70.2	0.38		86.6	5.7	54.0		9.47	9.22	2L

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

4/ Observed Values Corrected to 8% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Many of these selections are outstanding in overall quality. Elite 11 and 16 appear questionable in milling while Elite 42 is very poor in cookie diameter.

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
800483	SWD 70250-01W-1P-1H-1HOS	HRAYT 6	HRW	63.6	69.8	0.36	86.4	8.9	61.6	5M
800484	SWD 73087B-1H-1+-OS	HRAYT 16	HRW	62.4	67.4	0.34	85.0	7.5	58.1	8L
800485	SWM 731445*-1H-2H-H	HRAYT 19	HRW	64.0	68.5	0.38	84.3	7.9	61.0	5L
800486	OWW 74272H-1H-OH	HRAYT 28	HRW	62.8	71.3	0.36	88.1	9.1	59.3	4L
800487	SWM 742234*-09P-1P-P	HRAYT 42	HRW	63.6	67.8	0.34	85.6	9.8	60.6	4M
800488	SWO 730984A-1P-5P-3S-OS	HRAYT 54	HRW	63.6	69.6	0.33	87.7	8.7	62.1	4M
800489	SWO 730902F-1H-1H-7H-OP	HRAYT 58	HRW	62.8	71.9	0.37	88.0	9.7	58.7	1M
800490	SWO 730902F-1H-1P-1P-OP	HRAYT 60	HRW	62.8	69.9	0.36	86.7	9.9	59.6	3M
800491	SWO 731151A-2H-1H-2H-OP	HRAYT 63	HRW	63.6	74.4	0.36	91.4	9.7	59.5	4M
800492	SWO 731151A-2H-1S-3S-OP	HRAYT 66	HRW	62.0	73.5	0.35	91.1	8.6	59.3	5M
800493	SWO 731151C-3H-3P-2P-OP	HRAYT 69	HRW	62.4	72.8	0.38	88.5	9.0	60.1	3M
800494	SWM 730453*-4H-1H-1S-OS	HRAYT 73	HRW	64.8	72.3	0.40	87.1	10.8	63.0	3M
800495	SWM 73863*-3H-2P-1S-OP	HRAYT 78	HRW	62.0	68.2	0.40	82.8	10.6	62.2	8M
800496	SWM 730865*-6H-1S-1S-OS	HRAYT 80	HRW	63.2	70.4	0.39	85.4	9.8	62.5	8M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

4/ Observed Values Corrected to 9% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Please see NURSCO 21 for the data of the check variety (Wanser, Lab No. 800409). Like Nursery 21, this group also was very low in protein and make for some uncertainty the reliability of the data. The following three selections however do stand out from the others in overall quality: HRAYT28, HRAYT42, and HRAYT73.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

F.A. CHOLICK

MORO, OR

NURSCO 26

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
800483	SWD 70250-01W-1P-1H-1HOS	HRAYT 6	HRW	62.9	63.0	2.7	900	906	4
800484	SWD 73087B-1H-1+-OS	HRAYT 16	HRW	58.0	59.5	3.8	720	813	8
800485	SWM 731445*-1H-2H-H	HRAYT 19	HRW	63.3	64.4	3.7	665	733	9
800486	OWW 74272H-1H-OH	HRAYT 28	HRW	61.8	61.7	3.0	820	814	2
800487	SWM 742234*-09P-1P-P	HRAYT 42	HRW	62.8	62.0	2.2	888	838	2
800488	SWO 730984A-1P-5P-3S-OS	HRAYT 54	HRW	65.2	65.5	3.2	795	814	6
800489	SWO 730902F-1H-1H-7H-OP	HRAYT 58	HRW	60.8	60.1	1.5	800	757	6
800490	SWO 730902F-1H-1P-1P-OP	HRAYT 60	HRW	61.9	61.0	1.7	810	754	8
800491	SWO 731151A-2H-1H-2H-OP	HRAYT 63	HRW	61.6	60.9	2.3	805	762	4
800492	SWO 731151A-2H-1S-3S-OP	HRAYT 66	HRW	62.8	63.2	3.2	805	830	5
800493	SWO 731151C-3H-3P-2P-OP	HRAYT 69	HRW	61.5	61.5	2.6	745	745	9
800494	SWM 730453*-4H-1H-1S-OS	HRAYT 73	HRW	66.2	64.4	2.0	950	838	2
800495	SWM 73863*-3H-2P-1S-OP	HRAYT 78	HRW	67.2	65.6	4.1	820	721	6
800496	SWM 730865*-6H-1S-1S-OS	HRAYT 80	HRW	66.7	65.9	5.2	843	793	4

NURSCO 27

MORO, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE
								1/	3/		4/	
800497	YAMHILL (CI 14563)	ABYTA 7	SWW	62.0	75.0	0.42	90.1	8.0	52.5	8.97	9.08	3L
800498	YAMHILL (CI 14563)	ABYTA 8	SWW	60.8	75.0	0.41	90.4	7.0	53.4	9.10	9.10	2L
800499	LUKE (CI 14581)	ABYTA 14	SWW	64.0	74.2	0.37	91.7	6.0	53.5	9.32	9.21	2L
800500	DAWS (CI 17419)	ABYTA 13	SWW	62.4	74.0	0.39	90.4	6.1	54.4	8.97	8.88	5L
800501	STEPHENS (CI 17569)	ABYTA 1	SWW	61.6	72.7	0.39	88.8	7.8	53.5	9.05	9.14	2M
800502	STEPHENS (CI 17569)	ABYTA 3	SWW	61.2	73.3	0.40	88.9	7.6	52.7	9.28	9.35	2M
800503	SWD69282-02D-1H-1H-0H	ABYTA 22	SRW	63.6	72.1	0.40	86.9	7.8	53.7	9.24	9.30	3M
800504	OWW70015-1-01W4	ABYTA 33	6/ SWW	60.8	72.8	0.37	89.9	6.1	55.0	8.87	8.78	4M
800505	OWW71224-2-3CB-02W5	ABYTA 44	5/ SWW	62.4	74.9	0.40	90.8	7.8	53.5	9.02	9.11	2M
800506	OWW71412-2-4W4-01W4	ABYTA 53	6/ SWW	59.2	73.5	0.46	85.4	7.8	51.9	9.01	9.10	3M
800507	OWW71427-3-05W4	ABYTA 55	5/ SWW	62.0	74.9	0.40	90.9	7.4	53.5	9.02	9.06	3M
800508	OWW71427-3-16W4	ABYTA 56	HWW	62.0	75.1	0.47	86.9	6.4	59.6	8.31	8.25	6M
800509	OWW71439-1-2W4-05W4	ABYTA 63	5/ SWW	63.6	73.4	0.38	90.3	6.8	54.6	9.41	9.38	6L
800510	OWW71903-07W4	ABYTA 65	5/ SWW	63.2	73.5	0.39	89.8	8.3	53.5	9.12	9.27	4M
800511	SWO730888E-2H-1H-S	ABYTA 72	6/ SWW	63.2	72.2	0.40	87.8	7.8	53.5	9.10	9.19	2M
800512	OWW73190D-03H-2H-P	ABYTA 90	SWW	59.2	70.4	0.41	84.9	8.4	53.0	8.80	8.95	2M
800513	OWW72339-2-4-1S-0P	ABYTA 95	6/ SWW	62.0	72.7	0.40	88.5	8.1	53.2	9.10	9.22	3L
800514	OWW72345-1-04-1H-1P-P	ABYTA 103	5/ SWW	62.0	74.0	0.43	88.1	8.9	53.9	9.00	9.21	2M
800515	OWW72435-3-03-3H-1P-H	ABYTA 110	6/ SWW	60.4	71.9	0.41	86.4	8.9	53.9	8.98	9.19	5M
800516	OWW72341-2-01-2H-0P	ABYTA 122	6/ SWW	61.6	71.8	0.37	89.3	5.9	55.8	9.34	9.22	6L
800517	SWH72434-3H-1H-1H-P	KASSW 39	6/ SWW	60.8	71.6	0.37	88.6	7.4	54.0	9.05	9.09	2M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 7% Protein.

4/ Observed Values Corrected to 7% Protein.

COMMENTS: It appears many of these are excellent quality wheats. It should be noted that ABYTA 22 was judged a red wheat and ABYTA is distinctly a hard white selection. ABYTA 90 was low in flour yield. ABYTA 63 is outstanding.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 28

CORVALLIS, OR

F.A. CHOLICK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
800518	PROFIT 75	HRAYT 3	HRW	63.6	72.2	0.44	85.0	9.1	61.7	2M
800519	SWD70250-01W-1P1H-1H0S	HRAYT 6	HRW	64.0	71.7	0.39	87.0	9.3	64.9	2H
800520	SWD71424B-11H-2H-1H-OP	HRAYT 8	HRW	63.6	72.6	0.42	86.2	10.1	64.6	2H
800521	SW07308879B-1H-1+-OS	HRAYT 16	HRW	64.4	67.0	0.37	83.1	10.4	62.0	3M
800522	SWM731445*-1H-2H-H	HRAYT 19	HRW	64.0	70.2	0.41	84.5	9.3	64.4	5M
800523	SWD71217-32H-01H-1H-2HH	HRAYT 25	HRW	61.2	68.0	0.44	80.2	10.7	64.4	4M
800524	SWD71244B-11H-2H-3H-1HH	HRAYT 26	HRW	64.0	72.3	0.43	85.2	9.0	63.5	3M
800525	SWD71424B-11H-2H-3H-3HH	HRAYT 27	HRW	63.6	72.0	0.39	87.1	9.2	64.2	2M
800526	OWM74272H-1H-0H	HRAYT 28	HRW	58.4	70.6	0.40	85.4	9.2	61.6	6L
800527	OWM71266-2-11EH	HRAYT 38	HRW	62.4	75.3	0.41	89.3	10.3	63.2	3M
800528	SWM741926*-01P-1H-0H	HRAYT 41	HRW	63.6	73.7	0.39	88.8	8.8	62.2	2M
800529	SWM742234*-09P-1P-OP	HRAYT 42	HRW	64.0	70.5	0.35	87.6	10.5	62.8	2M
800530	SW0730864D-1P-2P-4S-OP	HRAYT 51	HRW	62.4	70.5	0.36	87.5	10.7	61.6	1M
800531	SW0730894A-1P-5P-3S-OS	HRAYT 54	HRW	60.0	68.5	0.39	83.5	11.8	64.6	3H
800532	SW0730902F-1H-1H-7H-OP	HRAYT 58	HRW	62.8	72.0	0.42	85.9	9.8	62.2	2M
800533	SW0730902F-1H-1P-1P-OP	HRAYT 60	HRW	62.4	70.8	0.39	86.0	10.0	62.7	2M
800534	SW0731151A-2H-1H-2H-OP	HRAYT 63	HRW	62.0	72.6	0.39	88.0	10.8	62.6	2M
800535	SW0731151A-2H-1S-2S-OP	HRAYT 65	HRW	62.4	73.4	0.36	90.0	10.3	61.9	3M
800536	SW0731151A-2H-1S-3S-OP	HRAYT 66	HRW	62.4	73.8	0.35	91.1	10.6	62.3	2M
800537	SW0731151C-3H-3P-2P-OP	HRAYT 69	HRW	62.8	73.4	0.40	88.0	10.6	62.8	2M
800538	SWM73086S*-6H-1S-1S-OS	HRAYT 80	HRW	64.0	70.8	0.40	85.5	10.6	63.2	6M
800539	SW0730902F-1H-2P-0H	ABYTA 115	HRW	59.6	66.3	0.45	78.2	9.6	61.6	2M

NURSCO 28

CORVALLIS, OR

F. A. CHOLICK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
800518	PROFIT 75								
800519	SWD70250-01W-1P1H-1H0S	HRAYT 3	HRW	65.0	65.9	1.7	750	806	9
800520	SWD71424B-11H-2H-1H-0P	HRAYT 6	HRW	68.4	69.1	2.1	922	965	2
800521	SWO7308879B-1H-1+-0S	HRAYT 8	HRW	68.9	68.8	2.2	883	877	3
800522	SWM731445*-1H-2H-H	HRAYT 16	HRW	66.6	66.2	2.2	945	920	2
		HRAYT 19	HRW	67.9	68.6	2.4	867	910	7
800523	SWD71217-32H-01H-1H-2HH	HRAYT 25	HRW	69.3	68.6	2.3	990	947	2
800524	SWD71244B-11H-2H-3H-1HH	HRAYT 26	HRW	66.7	67.7	2.3	800	862	9
800525	SWD71424B-11H-2H-3H-3HH	HRAYT 27	HRW	67.6	68.4	1.8	867	917	8
800526	OWW74272H-1H-0H	HRAYT 28	HRW	65.0	65.8	2.9	870	920	5
800527	OWW71266-2-11EH	HRAYT 38	HRW	66.2	65.9	2.0	930	911	4
800528	SWM741926*-01P-1H-0H	HRAYT 41	HRW	65.2	66.4	2.0	847	921	8
800529	SWM742234*-09P-1P-0P	HRAYT 42	HRW	66.5	66.0	1.4	955	924	4
800530	SWO730864D-1P-2P-4S-0P	HRAYT 51	HRW	66.5	65.8	1.0	890	847	5
800531	SWO730894A-1P-5P-3S-0S	HRAYT 54	HRW	70.6	68.8	2.3	1050	938	2
800532	SWO730902F-1H-1H-7H-0P	HRAYT 58	HRW	63.4	63.6	1.8	865	877	6
800533	SWO730902F-1H-1P-1P-0P	HRAYT 60	HRW	66.9	66.9	1.6	890	890	5
800534	SWO731151A-2H-1H-2H-0P	HRAYT 63	HRW	66.6	65.8	1.8	930	880	2
800535	SWO731151A-2H-1S-2S-0P	HRAYT 65	HRW	65.4	65.1	1.8	912	893	4
800536	SWO731151A-2H-1S-3S-0P	HRAYT 66	HRW	66.1	65.5	1.7	945	908	2
800537	SWO731151C-3H-3P-2P-0P	HRAYT 69	HRW	67.6	67.0	1.6	952	915	5
800538	SWM73086S*-6H-1S-1S-0S	HRAYT 80	HRW	68.0	67.4	3.9	1077	1040	2
800539	SWO730902F-1H-2P-0H	ABYTA 115	HRW	68.4	68.8	2.1	910	935	5

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein.4/ Observed Values Corrected to 10% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS: The baking properties of Profit 75 are atypical of the variety. It is too short in mixing time, low in loaf volume, and too poor in crumb grain to be Profit 75. Therefore all others were judged only on their own merit since no other variety of known quality was submitted for a check. As a group the mix times were too short and crumb grains of poor quality. Those that had good milling were poor in baking performance or vice-versa. HRAYT 80 is the best overall quality.

NURSCO 29

PENDLTN, MORO, & LIND

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	FABSC	FPEAK	FSTAB
800540	KHARKOF	C1001442	HRW	61.9	67.5	0.42	77.4	10.6	64.2	5.0	3.5
800541	WANSER	C1013844	HRW	63.3	71.4	0.42	84.0	10.2	61.3	8.1	5.3
800542	MANNING	C1017846	HRW	63.2	70.4	0.40	83.4	9.7	65.7	8.2	5.3
800543	UTAH SEL.890152	UT 890152	HRW	61.2	68.5	0.40	80.6	9.7	65.7	9.8	9.8
800544	WESTON	C1017727	HRW	62.4	68.0	0.41	79.4	9.6	66.8	6.5	3.6
800545	BAN/KO/178383/3/11-60-156/14107	ID 0154	6/ HRW	61.6	70.5	0.43	81.8	10.4	63.7	8.5	7.7
800546	CI 14106/MC/3/WRR//KO/178383	ID 0157	HRW	62.3	68.6	0.42	79.5	9.7	65.5	7.5	6.5
800547	HEGLAR/ID 5006	ID 0158	HRW	64.0	67.7	0.41	78.8	9.5	65.2	7.0	7.0
800548	SUWON 92/6*BURT//FALCO/2*BURT	WA 6582	HRW	61.8	69.4	0.45	78.7	9.0	62.9	8.0	3.8
800549	178383/ITANA//DM/3/WN/4/BURT/178383//BGR	UT 927124	6/ HRW	62.0	70.4	0.44	81.0	10.2	66.4	10.0	14.0
800550	DM/178383//CLM/3/SCT/4/BURT/178383//BGR	UT 930082	HRW	62.3	68.9	0.40	80.8	10.3	66.0	9.0	11.0
800551	BEZOSTAJA//BURT/178383/3/ARK	ID 51021	HRW	63.0	67.7	0.42	78.2	11.7	73.6	7.3	8.7
800552	BEZOSTAJA//BURT/178383/3/ARK	ID 51022	SRW	62.6	64.1	0.38	72.5	12.1	63.5	6.0	3.3
800553	ID 5011/WA 4765//ID 5011	ID 51032	SRW	61.1	65.1	0.43	70.8	11.4	59.1	4.5	3.5
800554	BEZOSTAJA//BURT/178383/ID 5011/ID 5006	ID 51031	HRW	62.3	65.5	0.42	73.6	10.9	63.0	6.3	3.2
800555	SON 64/11-60-155//HEG/3/WRR//KO/178383	ID 0178	HRW	61.2	63.6	0.42	71.6	10.5	64.7	1.4	1.8
800556	A 667 W-46/RANGER	ID 0179	HRW	63.7	69.3	0.40	81.2	9.5	64.3	1.2	1.5
800557	TRIUMP/LANCER, SEL.126	OR 792	SRW	62.6	68.6	0.40	79.7	9.5	57.8	1.0	9.1
800558	K6901513//WA5436/WA4564	WA 6584	HRW	63.0	67.8	0.42	78.3	9.8	64.1	5.5	3.5
800559	WA5836/KN700007	WA 6695	HRW	62.6	68.3	0.42	79.2	10.0	64.3	1.0	14.0
800560	RGR/3/11-60-156/1407//IT	ID 0207	6/ HRW	61.4	70.9	0.42	82.7	10.4	62.2	5.7	5.8
800561	A667W-46/3/11-60-156/14107//IT	ID 0208	HRW	60.4	69.2	0.42	80.0	10.1	60.1	6.0	5.7
800562	FRD/BEZ	MT 77002	HRW	63.3	69.5	0.41	81.3	10.6	63.5	7.0	7.0
800563	C 61-9/WLT//CRT	MT 77066	HRW	62.1	68.4	0.44	78.1	9.9	65.0	3.4	2.0
800564	C 61-9/WLT//CRT	MT 77077	HRW	62.5	67.5	0.42	77.6	10.0	65.0	3.4	2.0
800565	BEZOSTAJA/SPRAGUE, SEL.18-24	OR 7921	HRW	63.2	66.2	0.39	76.7	10.1	62.6	2.7	1.5
800566	CLARIFEN/WA5836, SEL.27-26	OR 7925	HRW	59.1	65.9	0.42	75.6	9.8	63.4	1.0	2.2
800567	BEZOSTAJA/REW, SEL.42-31	OR 7930	SRW	61.9	68.7	0.38	79.6	9.1	58.6	1.0	2.0

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

COMMENTS: Samples studied were made by compositing seed in equal parts from seed grown at Pendleton and Moro, OR and Lind, WA. These sites were selected because of their higher protein contents. Other nurseries received were 1-2% lower in mean protein than the selected locations which in themselves were border line for meaningful differentiation of baking quality.

In spite of good test wt. (fully filled kernels) the flour yield on the entire group is lower than expected. Flour milling evaluation was made by using the mean flour yield and milling score for Wanser and Manning.

The only selections with acceptable milling quality are: ID 0154, UT927124, ID 0179(HWW), ID 0207 and MT 77002.

PENDLTN, MORO, & LIND

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	MABSC	MTYPE
					3/			4/		3/	
800540	KHARKOF	C1001442	HRW	68.4	67.8	2.6	1003	969	2	66.9	4H
800541	WANSER	C1013844	HRW	65.8	65.6	3.6	980	966	2	62.2	4H
800542	MANNING	C1017846	HRW	67.8	68.1	4.8	930	949	4	64.2	7M
800543	UTAH SEL. 890152	UT 890152	HRW	68.9	69.2	5.8	908	927	4	64.3	8M
800544	WESTON	C1017727	HRW	66.7	67.1	3.8	870	895	4	63.7	6M
800545	BAN/KO/178383/3/11-60-156/14107	ID 0154	HRW	66.6	66.2	3.7	993	968	2	63.3	6M
800546	C1 14106/MC/3/WRR//KO/178383	ID 0157	HRW	66.3	66.6	4.3	880	899	5	63.2	6M
800547	HEGLAR/ID 5006	ID 0158	HRW	64.6	65.1	4.6	843	874	6	61.7	6M
800548	SUWON 92/6*BURT//FALCO/2*BURT	WA 6582	HRW	62.7	63.7	4.3	860	922	6	60.8	6M
800549	178383/1TANA//DM/3/WN/4/BURT/178383//BGR	UT 927124	HRW	68.2	68.0	4.2	995	983	2	65.1	5H
800550	DM/178383//CLM/3/SCT/4/BURT/178383//BGR	UT 930082	HRW	66.4	66.1	4.1	915	896	2	63.7	6M
800551	BEZOSTAJA//BURT/178383/3/ARK	ID 51021	HRW	70.3	68.6	3.3	1035	930	2	66.2	3H
800552	BEZOSTAJA//BURT/178383/3/ARK	ID 51022	SRW	65.9	63.8	2.3	1125	999	2	63.4	3H
800553	ID 5011/WA 4765//ID 5011	ID 51032	SRW	63.5	62.1	2.2	1100	1016	2	61.7	3H
800554	BEZOSTAJA//BURT/178383/ID 5011/ID 5006	ID 51031	HRW	66.3	65.4	2.6	1000	944	2	65.0	4H
800555	SON 64/11-60-155//HEG/3/WRR//KO/178383	ID 0178	HRW	68.7	68.2	4.6	883	852	4	65.3	5H
800556	A 667 W-46/RANGER	ID 0179	HRW	67.4	67.9	6.4	823	854	4	64.0	7H
800557	TRIUMF/LANCER, SEL.126	OR 792	SRW	61.5	62.0	3.3	968	998	2	60.6	6M
800558	K6901513//WA5436/WA4564	WA 6584	HRW	65.8	66.0	3.8	895	907	4	63.6	6M
800559	WA5836/KN700007	WA 6695	HRW	68.5	68.5	4.8	875	875	2	65.1	5H
800560	RGR/3/11-60-156/1407//IT	ID 0207	HRW	65.7	65.3	3.1	955	930	2	64.4	4H
800561	A667W-46/3/11-60-156/14107//IT	ID 0208	HRW	66.2	66.1	3.8	1003	997	2	63.7	6M
800562	FRD/BEZ	MT 77002	HRW	67.9	67.3	3.4	903	866	2	65.4	6M
800563	C 61-9/WLT//CRT	MT 77066	HRW	65.3	65.4	1.8	993	999	3	64.0	3M
800564	C 61-9/WLT//CRT	MT 77077	HRW	66.4	66.4	2.3	991	991	3	64.0	2H
800565	BEZOSTAJA/SPRAGUE, SEL.18-24	OR 7921	HRW	64.3	64.2	1.3	945	939	2	63.8	3M
800566	CLARIFEN/WA5836, SEL.27-26	OR 7925	HRW	64.1	64.3	5.1	830	842	8	62.9	6M
800567	BEZOSTAJA/REW, SEL.42-31	OR 7930	SRW	62.6	63.5	3.1	900	954	4	60.1	4L

1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.

COMMENTS: It should also be noted that four of the selections entered have soft endosperm characteristics and would be classified as SRW. These are ID 51021, ID 51032, OR 792 and OR 7930.

Of the five selections with promising milling properties three also have acceptable bread baking properties. ID 0179 and MT 77002 both had low loaf volume and questionable crumb grain.

Those selections that are equal to or better than Western in overall quality are: UT 930082, ID 51021, OR 792, WA 6695 and ID 0208 (HWW).

NURSCO 30

PENDLN, KALISL, & POMY

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	VISC	VISCC	CODI	CODIC	MABSC	MTYPE
800568	KARKOF	C1001442	HRW	60.5	65.8	0.44	73.7	9.4	136	63	8.16	8.35	58.7	3M
800569	ELGIN	C1011755	CLUB	60.7	72.4	0.42	84.3	7.3	38	33	9.01	9.03	52.5	2L
800570	MORO	C1013740	CLUB	58.8	71.4	0.41	83.2	7.1	40	38	9.21	9.22	52.8	2L
800571	NUGAINES	C1013968	SWW	60.8	68.9	0.40	78.8	6.9	45	47	8.82	8.81	54.0	2L
800572	STEPENS	C1017596	SWW	59.7	70.9	0.40	81.8	7.5	37	31	8.97	9.03	54.4	2L
800573	FARO	C1017590	CLUB	58.3	71.4	0.42	82.5	7.1	39	38	8.88	8.89	52.5	2L
800574	SUWON 92/3*OMAR//MORO, 142	OR71142	CLUB	59.5	69.2	0.41	79.9	7.1	38	36	8.87	8.88	51.8	2L
800575	YAMHILL/HYSLOP	OR68007	5/ SWW	60.3	72.3	0.39	84.6	7.6			8.93	9.00	54.1	2L
800576	LUKE/WA 5829	WA 6363	5/ SWW	61.2	71.2	0.40	81.1	6.8			9.14	9.12	53.3	3L
800577	WA 4765//BURT/PI 178383	ID 745318	6/ SWW	59.7	69.8	0.44	77.9	7.5			8.77	8.83	54.1	3L
800578	WA 4765//BURT/PI 178383	C1017730	6/ SWW	59.7	70.6	0.46	77.1	7.1			8.85	8.86	54.0	3L
800579	LUKE/NORCO, VH 74333	WA 6470	5/ SWW	60.0	72.7	0.38	85.0	7.4			9.21	9.26	54.4	4L
800580	CI 15923//NORD DESPREZ/2*101	WA 6471	6/ SWW	60.0	70.6	0.41	80.4	7.2			8.65	8.67	55.2	4L
800581	SEMI DWARF MULTILINE CLUB	WA 6472	5/ CLUB	59.3	71.7	0.39	84.8	6.9	33	35	9.07	9.06	51.0	2L
800582	YAMHILL/HYSLOP	OR 680073	5/ SWW	59.7	72.1	0.41	83.0	7.2			9.06	9.08	52.6	3L
800583	TYEE	C1017773	CLUB	58.4	69.6	0.39	81.2	6.5	33	43	9.06	9.02	52.5	2L
800584	CI 14484/K 691533, VH 075847	WA 6580	6/ SWW	59.4	69.2	0.40	78.8	6.8			9.00	8.98	54.2	4L
800585	VD 67217/VB 67297, VD 075211	WA 6581	6/ CLUB	60.5	69.2	0.40	80.3	7.5	38	31	9.07	9.10	53.1	2L
800586	REW/LUKE, SEL.305	OR 7794	5/ SWW	62.1	72.4	0.39	83.5	6.8			8.88	8.86	54.9	3L
800587	CI 14482/MORO, SEL.E 109	OR 797	6/ SWW	59.8	70.6	0.39	81.4	7.0			8.95	8.95	54.8	2L
800588	DAWS/WA5829, VH078141	WA 6696	SWW	61.4	69.5	0.41	78.7	6.8			8.63	8.61	54.2	5L
800589	HYSLOP/BRUEHL70-254-6, VH078632	WA 6697	SWW	58.1	67.8	0.43	74.9	7.1			8.86	8.87	55.4	5L
800590	SU92/6*0/3/T.SPELTIA/CTL//3*0, SEL.A7815	WA 6698	5/ CLUB	61.3	71.5	0.40	84.2	6.9	31	33	9.04	9.04	50.4	2L

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 7% Protein.

4/ Observed Values Corrected to 7% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: A three location composite of equal parts from Pendleton, OR, Kalispell, MT and Pomeroy, WA was made for the milling and baking quality tests. OR 7142 was about 2% lower in flour yield than Moro or Faro, which is significant. WA 6581 is more similar to Tyee in overall quality than to Moro or Faro (lower flour yield). WA 6696 is low in flour yield, milling score and marginal in cookie diameter. WA 6697 is poor in all milling characteristics.

NURSCO 31

KALISL, R.S., & TWIN F

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	FABSC	FPEAK	FSTAB	BABS
800591	BORAH (HARD RED SPRING'S)	C1017267	6/ HRS	61.8	72.1	0.43	83.7	11.3	65.1	4.2	2.1	65.9
800592	ROQUE 66/FREMONT	UT 25910	6/ HRS	61.0	71.2	0.44	82.2	11.5	59.7	4.0	4.3	65.5
800593	K6901495/MN206268	WA 6510	6/ HRS	61.2	71.1	0.45	81.8	10.7	63.9	6.2	1.3	68.0
800594	MNRN/TBR66/3/TZPP/AN3//B61-136	ID 0167	HRS	62.1	69.3	0.42	80.4	10.4	62.9	1.0	1.3	67.9
800595	BORAH/3/11-60-//TZPP/SN64	ID 0153	HRS	59.4	65.2	0.44	73.3	11.8	70.7	5.4	1.4	72.1
800596	BANNOCK/FREMONT	UT 881235	5/ HRS	62.6	71.8	0.43	83.4	10.6	61.6	1.2	2.3	67.2
800597	BANNOCK/FREMONT	UT 881292	6/ HRS	61.2	68.7	0.45	77.7	11.5	64.8	5.6	2.5	69.2
800598	K6901496/ERA	WA 6748	6/ HRS	61.3	71.4	0.44	82.4	11.1	61.4	6.5	3.0	66.4
800599	K71051/WA5949	WA 6749	6/ HRS	60.3	71.7	0.48	81.5	10.4	62.8	5.4	3.9	65.5
800600	K71051/WA5949	WA 6750	6/ HRS	60.3	72.6	0.44	84.1	10.0	64.6	6.4	3.6	67.5
800601	BANNOCK/FREMONT	UT 881389	HRS	60.3	69.5	0.44	79.0	11.6	66.0	6.5	3.6	69.8
800602	BANNOCK/FREMONT	UT 881397	HRS	60.6	67.1	0.44	75.9	10.5	67.9	6.0	1.8	69.5
800603	BANNOCK/738-274-1	UT 541771	HRS	60.5	67.5	0.40	77.6	10.9	66.9	3.7	2.4	67.5
800604	BANNOCK/738-274-1	UT 541774	6/ HRS	61.2	68.6	0.37	82.2	10.0	64.3	4.5	2.0	66.4
800605	BANNOCK/738-274-1	UT 541777	HRS	60.0	68.6	0.39	80.4	9.6	62.3	4.3	2.7	64.4
800606	BORAH/3//11-60-101//TZPP/SN64	ID 0134	HRS	61.3	67.7	0.39	79.1	11.7	64.7	8.7	5.8	71.0
800607	BORAH/ID0033	ID 0162	HRS	61.0	69.1	0.40	78.7	11.0	65.7	8.0	6.4	67.6
800608	SN64/WN/4/LEE//NO 58/TC/3/TZPP/SN64	ID 0165	HRS	60.0	69.4	0.45	79.2	10.9	62.9	5.5	4.0	64.0
800609	ID0042/A6546S-2-2	ID 0166	HRS	61.5	69.4	0.45	78.5	10.3	66.2	4.7	2.6	66.5
800610	BLUEBIRD SIB/ANZA	UC 353	HRS	60.6	71.1	0.42	82.9	9.7	63.1	2.9	1.5	60.9
800611	C113232/RAMONA//ANZA	UC 355	HRS	59.1	67.8	0.41	77.7	10.8	65.9	3.4	2.1	63.6
800612	FEDERATION (SOFT WHITE SPRING'S)	C1004734	SWS	57.9	69.7	0.45	78.0	9.2				
800613	FIELDWIN	C1017425	SWS	62.2	70.4	0.38	82.1	8.5				
800614	A7136S-5-2-3	ID 0144	6/ SWS	60.9	70.1	0.37	81.9	8.2				
800615	ID0053/A6596S-A-21-1	ID 0183	6/ SWS	63.9	70.9	0.40	82.0	9.6				
800616	A6543S-14-1-3/A6596S-A-21-1	ID 0184	6/ SWS	62.9	70.2	0.39	82.4	8.9				
800617	A7250S-A-8-1	ID 0185	6/ SWS	62.4	70.0	0.36	82.0	8.5				
800618	A7243S-A-3-1	ID 0187	SWS	61.4	68.4	0.39	78.7	8.5				
800619	A7244S-B-2-1	ID 0188	6/ SWS	59.5	70.5	0.39	79.4	8.7				
800620	C114482/K6202578R21	WA 6402	6/ SWS	60.9	73.2	0.41	84.3	9.4				
800621	VG070954/FIELDER	WA 6615	5/ SWS	61.5	73.4	0.36	86.3	8.6				
800622	VG070954/FIELDER	WA 6616	6/ SWS	63.2	70.4	0.37	83.2	9.0				
800623	K7105153/ID55	WA 6619	6/ SWS	61.5	70.3	0.37	81.6	9.2				
800624	ID49/WA5947	WA 6751	6/ SWS	59.7	70.3	0.42	79.9	9.0				
800625	K7105152/ID53	WA 6752	6/ SWS	59.9	68.1	0.41	77.4	8.3				

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.

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KALISL, R.S., & TWIN F

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	MABSC 3/	MTYPE
800591	BORAH (HARD RED SPRING'S)	C1017267	HRS	64.6	2.1	1090	1009	2			64.2	2H
800592	ROQUE 66/FREMONT	UT 25910	HRS	64.0	2.6	1123	1030	2			65.6	4H
800593	K6901495/MN206268	WA 6510	HRS	67.3	3.7	1005	962	2			65.9	5H
800594	MRN/TBR66/3/TZPP/AN3//B61-136	ID 0167	HRS	67.5	3.6	1090	1065	2			66.1	5H
800595	BORAH/3/11-60-//TZPP/SN64	ID 0153	HRS	70.3	2.6	1088	976	2			66.1	4H
800596	BANNOCK/FREMONT	UT 881235	HRS	66.6	3.5	1140	1103	2			65.2	5H
800597	BANNOCK/FREMONT	UT 881292	HRS	67.7	3.5	1220	1127	1			66.3	4H
800598	K6901496/ERA	WA 6748	HRS	65.3	3.5	1073	1005	2			63.9	4H
800599	K71051/WA5949	WA 6749	HRS	65.1	2.8	1090	1065	2			64.7	4H
800600	K71051/WA5949	WA 6750	HRS	67.5	3.6	1040	1040	2			66.1	5H
800601	BANNOCK/FREMONT	UT 881389	HRS	68.2	3.4	1305	1206	2			66.8	4H
800602	BANNOCK/FREMONT	UT 881397	HRS	69.0	3.2	1108	1077	2			67.6	4H
800603	BANNOCK/738-274-1	UT 541771	HRS	66.6	2.2	1025	969	2			65.2	3M
800604	BANNOCK/738-274-1	UT 541774	HRS	66.4	2.9	1100	1100	2			65.0	4M
800605	BANNOCK/738-274-1	UT 541777	HRS	64.8	3.3	1005	1030	2			63.4	4M
800606	BORAH/3//11-60-101//TZPP/SN64	ID 0134	HRS	69.3	4.4	1115	1010	1			67.9	5H
800607	BORAH/ID0033	ID 0162	HRS	66.6	3.5	1125	1063	1			65.2	5H
800608	SN64/WN/4/LEE//NO 58/TC/3/TZPP/SN64	ID 0165	HRS	63.1	2.5	1045	989	2			63.7	3H
800609	ID0042/A6546S-2-2	ID 0166	HRS	66.2	2.3	1128	1109	2			66.8	2H
800610	BLUEBIRD SIB/ANZA	UC 353	HRS	61.2	1.5	1023	1042	3			62.8	3M
800611	C113232/RAMONA//ANZA	UC 355	HRS	62.8	1.3	1088	1038	2			62.4	2H
800612	FEDERATION (SOFT WHITE SPRING'S)	C1004734	SWS					8.92	8.83		54.7	1M
800613	FIELDWIN	C1017425	SWS					8.99	8.82		54.6	1M
800614	A7136S-5-2-3	ID 0144	SWS					8.97	8.78		55.8	2L
800615	ID0053/A6596S-A-21-1	ID 0183	SWS					9.16	9.11		55.5	1M
800616	A6543S-14-1-3/A6596S-A-21-1	ID 0184	SWS					9.14	9.02		54.8	2M
800617	A7250S-A-8-1	ID 0185	SWS					9.23	9.07		55.3	2M
800618	A7243S-A-3-1	ID 0187	SWS					9.12	8.95		54.4	3L
800619	A7244S-B-2-1	ID 0188	SWS					9.27	9.13		54.9	3L
800620	C114482/K6202578R21	WA 6402	SWS					8.79	8.73		54.2	2M
800621	VG070954/FIELDER	WA 6615	SWS					9.34	9.18		54.7	2L
800622	VG070954/FIELDER	WA 6616	SWS					9.27	9.16		54.6	1M
800623	K7105153/ID55	WA 6619	SWS					9.03	8.94		55.0	2M
800624	ID49/WA5947	WA 6751	SWS					9.09	8.98		55.8	2M
800625	K7105152/ID53	WA 6752	SWS					9.21	9.02		55.0	2L

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WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

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WESTERN REGIONAL SPRING'S

KALISL, R.S., & TWIN F

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	FABSC	FPEAK	FSTAB	BABS
800626	N7000315/ID65	WA 6753	SWS	61.6	70.8	0.45	79.0	9.4				
800627	HYSLOP/FIELDER	ID 0172	SWS	60.2	71.0	0.42	81.5	8.9				

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KALISL, R.S., & TWIN F

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	MABSC	MTYPE
				3/			4/			4/	3/	
800626	N7000315/ID65	WA 6753	SWS						8.67	8.60	55.1	1M
800627	HYSLOP/FIELDER	ID 0172	SWS						9.25	9.13	55.4	1M

COMMENTS:

(HRS) A composite of equal parts was made from seed grown at Kalispell, MT, Royal Slope, Wa, and Twin Falls, ID. Several of the HRS selections appear questionable to poor in milling. Those selections that are questionable are ID 167, UT 881389, UT 541777, ID 162, ID 165, ID 166; those which had poor flour yield and low milling score are ID 153, UT 881292, UT 881397, ID 541771, ID 134 and UC 355. UC 353 was acceptable in milling but was too short in dough mixing properties and slightly heavy crumb grain.
(SWS) In the soft white selections most appear equal to or better than Fieldwin in overall quality. ID 187 and WA 6725 were poor in milling properties. WA 6753 had a low milling score because of high flour ash and had a small cookie spread.

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R. LINE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/
800628	LEMHI	C1011415	SWS	60.4	73.9	0.47	85.0	9.4	51.9	9.20	9.13
800629	LEMHI TREATED	C1011415	SWS	61.6	73.7	0.47	84.8	10.4	51.6	9.35	9.39
800630	MARFED	C1011919	SWS	59.6	70.4	0.48	80.3	11.3	58.1	9.04	9.16
800631	MARFED TREATED	C1011919	SWS	60.0	71.1	0.47	81.4	11.6	57.7	8.89	9.06
800632	TWIN	C1014588	SWS	58.0	72.3	0.54	78.5	10.1	54.4	9.15	9.16
800633	TWIN TREATED	C1014588	SWS	60.0	73.5	0.54	80.3	10.5	54.3	9.11	9.17
800634	SPRINGFIELD	C1014589	SWS	59.2	74.3	0.49	84.7	9.6	51.2	9.24	9.22
800635	SPRINGFIELD TREATED	C1014589	SWS	60.0	75.0	0.49	85.6	10.0	51.1	9.20	9.20
800636	WARED	C1015926	HRS	61.6	75.0	0.41	89.1	11.3	59.5	8.74	8.84
800637	WARED TREATED	C1015926	HRS	61.6	75.5	0.43	88.9	11.4	58.9	8.66	8.77
800638	BORAH	C1017267	HRS	62.4	75.8	0.36	92.7	12.1	58.2	8.61	8.78
800639	BORAH TREATED	C1017267	HRS	62.8	74.9	0.34	93.1	12.0	58.5	8.50	8.66
800640	FIELDER	C1017268	SWS	60.8	73.3	0.45	85.9	9.0	60.5	9.15	9.04
800641	FIELDER TREATED	C1017268	SWS	61.6	73.7	0.44	87.2	9.7	50.7	9.14	9.10
800642	FIELDWIN	C1017425	SWS	60.8	73.8	0.46	85.5	9.8	51.0	8.89	8.87
800643	FIELDWIN TREATED	C1017425	SWS	62.0	74.2	0.45	86.8	9.4	50.9	8.92	8.86
800644	WAMPUM	C1017691	HRS	61.2	74.2	0.43	87.4	11.2	60.2	8.73	8.83
800645	WAMPUM TREATED	C1017691	HRS	61.2	74.8	0.43	88.1	11.2	60.1	8.98	9.08
800646	DIRKWIN	C1017745	SWS	58.4	73.6	0.54	80.1	9.9	50.1	9.05	9.04
800647	DIRKWIN TREATED	C1017745	SWS	58.4	73.9	0.50	83.0	10.0	50.0	8.95	8.95
800648	WALLADAY	C1017759	SWS	57.2	69.4	0.50	77.9	9.9	53.6	8.95	8.94
800649	WALLADAY TREATED	C1017759	SWS	59.2	70.5	0.49	79.8	10.0	53.6	9.04	9.04
800650	LEMHI LB-1	C1011415	SWS	60.4	73.0	0.46	85.0	9.9	51.6	9.16	9.15
800651	LEMHI LC-7	C1011415	SWS	61.2	73.2	0.45	85.9	10.5	51.0	9.15	9.20
800652	LEMHI LC-11	C1011415	SWS	60.8	73.9	0.49	84.1	10.4	50.4	9.06	9.11
800653	LEMHI LC-13	C1011415	SWS	61.6	74.2	0.48	84.8	11.0	50.5	9.05	9.16
800654	LEMHI LC-1	C1011415	SWS	60.0	72.5	0.49	82.4	10.4	51.6	9.30	9.34
800655	LEMHI LB-7	C1011415	SWS	61.2	73.8	0.49	84.0	11.0	51.6	9.02	9.13
800656	LEMHI LB-11	C1011415	SWS	60.8	73.7	0.50	82.9	10.7	50.8	9.24	9.31
800657	LEMHI LB-13	C1011415	SWS	61.2	73.6	0.49	83.9	11.0	50.5	9.09	9.20
800658	WALLADAY WC-1	C1017759	SWS	58.4	71.4	0.49	80.8	9.3	53.7	9.00	8.92
800659	WALLADAY WC-7	C1017759	SWS	59.6	72.0	0.50	80.8	10.2	54.6	8.86	8.88
800660	WALLADAY WC-11	C1017759	SWS	58.8	71.1	0.50	79.8	10.0	55.5	8.80	8.80
800661	WALLADAY WC-13	C1017759	SWS	60.0	73.3	0.51	81.9	10.4	53.2	8.94	8.98
800662	WALLADAY WB-1	C1017759	SWS	55.6	69.8	0.53	76.2	9.9	53.4	9.20	9.19

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LABNUM	VARIETY	IDNO	CLASS	MTYPE	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
800628	LEMHI	CI011415	SWS	2M						
800629	LEMHI TREATED	CI011415	SWS	1M						
800630	MARFED	CI011919	SWS	2M						
800631	MARFED TREATED	CI011919	SWS	2M						
800632	TWIN	CI014588	SWS	2M						
800633	TWIN TREATED	CI014588	SWS	2M						
800634	SPRINGFIELD	CI014589	SWS	1M						
800635	SPRINGFIELD TREATED	CI014589	SWS	1M						
800636	WARED	CI015926	HRS	3M	64.0	62.7	2.6	1100	1019	2
800637	WARED TREATED	CI015926	HRS	3M	62.5	61.1	2.1	1172	1085	2
800638	BORAH	CI017267	HRS	1H	63.5	61.4	1.3	1108	978	2
800639	BORAH TREATED	CI017267	HRS	1H	64.7	62.7	1.3	1100	976	2
800640	FIELDER	CI017268	SWS	1M						
800641	FIELDER TREATED	CI017268	SWS	1M						
800642	FIELWIN	CI017425	SWS	2M						
800643	FIELWIN TREATED	CI017425	SWS	2M						
800644	WAMPUM	CI017691	HRS	4H	65.1	63.9	3.8	1107	1033	2
800645	WAMPUM TREATED	CI017691	HRS	4H	65.0	63.8	3.1	1110	1036	2
800646	DIRKWIN	CI017745	SWS	1M						
800647	DIRKWIN TREATED	CI017745	SWS	1M						
800648	WALLADAY	CI017759	SWS	3M						
800649	WALLADAY TREATED	CI017759	SWS	3M						
800650	LEMHI LB-1	CI011415	SWS	1M						
800651	LEMHI LC-7	CI011415	SWS	2M						
800652	LEMHI LC-11	CI011415	SWS	1M						
800653	LEMHI LC-13	CI011415	SWS	1M						
800654	LEMHI LC-1	CI011415	SWS	2M						
800655	LEMHI LB-7	CI011415	SWS	2M						
800656	LEMHI LB-11	CI011415	SWS	2M						
800657	LEMHI LB-13	CI011415	SWS	1H						
800658	WALLADAY WC-1	CI017759	SWS	3M						
800659	WALLADAY WC-7	CI017759	SWS	3M						
800660	WALLADAY WC-11	CI017759	SWS	3M						
800661	WALLADAY WC-13	CI017759	SWS	3M						
800662	WALLADAY WB-1	CI017759	SWS	3M						

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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH <u>1/</u>	MSCOR	FPROT <u>1/</u>	MABSC <u>3/</u>	CODI	CODIC <u>4/</u>
800663	WALLADAY WB-7	CI017759	SWS	58.4	70.7	0.50	79.1	10.4	53.6	9.01	9.06
800664	WALLADAY WB-11	CI017759	SWS	58.0	70.7	0.50	79.1	10.1	53.5	8.91	8.92
800665	WALLADAY WB-13	CI017759	SWS	58.0	71.3	0.50	79.8	10.3	53.8	9.05	9.08

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LABNUM	VARIETY	IDNO	CLASS	MTYPE	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR
800663 WALLADAY WB-7		C1017759	SWS							
800664 WALLADAY WB-11		C1017759	SWS							
800665 WALLADAY WB-13		C1017759	SWS							

3/ 4/

- 1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.
3/ Absorption at 14% Moisture Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.
4/ Observed Values Corrected to 10% Protein.

ABBREVIATIONS: WC = Walladaya Check (Non treated seed)
WB = " Treated (Bayleton treated seed)
LC = Lemhi Check (Non treated seed)
LB = " Treated (Bayleton treated seed)
1 = Check (Unsprayed, but heat treated seed)
7 = Sprayed with Bayleton
11 = Sprayed with BAS-421
13 = Sprayed with CGA-65250

COMMENTS: Small improvements in test weight, flour yield, and milling score generally was reflected with the Bayleton treatment. Baking results were not different. Both the LC-1 and WB-1 treatments were poorer in milling performance than the other treated methods. We believe a mistake of identity may have occurred with Borah. The dough mixing properties were not typical for Borah.

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C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
800666	URQUIE NURSERY 31	C1017413	SWS	56.8	70.6	0.42	84.0	8.5	56.6	9.16	9.11	2L
800667		K79-5651	5/ SWS	60.0	70.3	0.34	89.1	9.2	57.0	9.00	9.02	8M
800668		K79-5669	5/ SWS	60.4	71.3	0.36	89.0	9.4	56.1	9.14	9.18	6M
800669		K79-5655	5/ SWS	60.8	70.7	0.36	88.2	9.3	56.8	9.21	9.25	8M
800670		K79-5597	6/ SWS	58.4	71.1	0.45	83.0	9.9	56.5	9.44	9.54	2M
800671		K79-5549	5/ SWS	59.2	72.1	0.37	89.2	9.3	54.7	9.35	9.38	6L
800672	NURSERY 32	K79-5208	5/ SWS	61.6	72.6	0.37	90.0	8.0	54.9	9.41	9.30	3L
800673		K79-5209	5/ SWS	61.6	70.8	0.33	90.3	7.9	55.4	9.15	9.03	2L
800674		K79-5202	6/ SWS	63.6	69.8	0.38	85.8	8.1	54.4	9.26	9.16	4L
800675	URQUIE NURSERY 33	C1017413	SWS	56.8	72.6	0.39	88.7	8.0	55.0	9.31	9.20	2L
800676		K79-5801	6/ SWS	63.6	71.1	0.37	88.0	7.9	54.8	9.19	9.07	8L
800677		K79-5652	SWS	60.4	70.0	0.38	86.0	9.7	58.3	8.97	9.05	6M
800678		K79-5658	6/ SWS	60.0	71.8	0.37	89.2	10.3	56.5	9.06	9.21	4M
800679		K79-5613	SWS	60.0	70.2	0.40	84.7	9.8	56.7	9.39	9.48	2M
800680		K79-5599	SWS	59.6	71.3	0.41	85.8	8.7	55.4	9.31	9.28	2L
800681		K79-5663	6/ SWS	60.4	71.0	0.35	89.4	9.7	58.2	9.12	9.20	6M
800682		K79-5139	SWS	63.2	72.0	0.39	87.8	8.5	55.9	9.16	9.11	3L
800683		K79-5601	6/ SWS	60.4	71.6	0.40	87.1	9.1	56.6	9.32	9.34	2M
800684		K79-5666	6/ SWS	60.0	70.6	0.37	87.4	9.3	56.7	9.07	9.11	8M
800685	NURSERY 34	K79-5656	SWS	60.0	70.7	0.38	86.7	10.5	57.8	9.12	9.29	6M
800686		K79-5660	6/ SWS	60.8	70.9	0.36	88.3	10.1	57.8	9.10	9.22	6M
800687		K79-5595	SWS	58.8	70.0	0.42	83.3	9.9	57.8	9.41	9.51	2M
800688	URQUIE NURSERY 35	C1017413	SWS	60.8	72.2	0.39	88.4	8.2	55.8	9.31	9.22	2L
800689		K79-5579	SWS	60.0	71.1	0.40	86.3	8.0	57.0	9.29	9.18	2L
800690		K79-5589	SWS	60.0	70.8	0.41	85.2	8.7	56.3	9.26	9.23	2L
800691		K79-5612	SWS	59.6	71.4	0.42	85.2	9.0	55.6	9.30	9.30	2L
800692		K79-5604	6/ SWS	60.4	72.1	0.41	86.6	8.7	56.8	9.26	9.23	2L
800693		K79-5585	SWS	59.6	72.0	0.42	85.7	9.3	56.4	9.24	9.27	2L
800694	NURSERY 36	K79-5091	SWS	60.4	70.8	0.35	88.9	8.3	56.7	8.86	8.79	6L
800695		K79-5094	6/ SWS	60.4	71.6	0.34	90.7	8.7	57.3	8.90	8.87	6L
800696		K79-5090	6/ SWS	60.4	71.0	0.36	88.8	9.1	57.9	8.92	8.94	7M
800697		K79-5750	6/ SWS	60.8	70.8	0.35	89.3	9.6	57.0	9.29	9.35	4M
800698		K79-5986	6/ SWS	57.6	71.1	0.39	87.0	8.0	56.1	9.61	9.50	4L
800699	URQUIE NURSERY 37	C1017413	SWS	60.4	71.0	0.39	86.9	7.9	56.6	9.11	8.92	2L
800700		K79-5575	5/ SWS	60.0	73.2	0.41	88.1	8.8	55.2	9.29	9.27	2L

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
800701	NURSERY 38	K79-5460	6/ SWS	58.0	71.2	0.39	86.6	8.2	54.0	9.76	9.67	4L
800702		K79-5593	6/ SWS	59.2	71.2	0.41	85.5	9.3	56.0	9.15	9.18	2M
800703		K79-5400	SWS	59.6	68.0	0.43	80.2	8.4	55.3	8.94	8.87	6L
800704		K79-5567	SWS	59.2	72.0	0.45	84.2	9.3	56.3	9.10	9.13	2M
800705		K79-5574	SWS	58.0	69.7	0.44	81.7	9.8	56.5	9.27	9.36	2M
800706	NURSERY 38	K79-5578	6/ SWS	60.0	72.5	0.43	86.3	8.9	56.6	9.24	9.23	2M
800707		K79-5602	6/ SWS	58.4	69.5	0.42	82.8	9.6	56.2	9.30	9.37	2M
800708		K79-5560	6/ SWS	59.6	70.9	0.38	86.9	8.1	54.9	9.21	9.11	2L
800709		K79-5650	6/ SWS	60.4	69.6	0.34	88.1	9.4	58.6	9.25	9.29	8M
800710		K79-5147	SWS	61.6	69.2	0.38	85.3	8.4	55.4	9.29	9.22	6L
800711	URQUIE NURSERY 39	K79-5590	SWS	58.8	71.1	0.43	84.4	9.2	55.2	9.21	9.23	2M
800712		C1017413	SWS	61.6	72.7	0.39	88.5	7.9	55.8	9.62	9.50	2L
800713		K79-5085	6/ SWS	61.6	71.2	0.34	90.0	8.5	57.1	9.00	8.94	5L
800714		K79-5097	6/ SWS	60.8	72.8	0.38	89.8	8.9	57.1	8.94	8.93	4L
800715		K79-5096	5/ SWS	61.6	73.1	0.37	90.8	8.5	57.6	9.12	9.07	5L
800716	NURSERY 40	K79-5092	6/ SWS	62.0	73.6	0.38	90.5	8.1	57.8	8.95	8.85	5L
800717		K79-5089	6/ SWS	62.0	72.3	0.38	89.3	8.2	58.0	8.94	8.85	5L
800718		K79-5310	6/ SWS	63.2	73.0	0.39	89.0	9.0	56.1	9.26	9.26	3L
800719		K79-5095	6/ SWS	62.0	72.7	0.37	89.8	8.5	57.6	9.05	8.99	5L
800720		K79-5337	5/ SWS	64.0	75.2	0.40	91.2	8.4	55.6	9.35	9.28	2L
800721	NURSERY 40	K79-5138	6/ SWS	62.8	72.6	0.40	88.3	8.1	54.5	9.17	9.08	5L
800722		K79-5134	6/ SWS	63.2	72.8	0.41	87.8	8.7	55.7	9.19	9.15	3L
800723		K79-5170	SWS	62.8	72.8	0.40	88.1	8.4	54.5	9.12	9.06	3L
800724		K79-5130	SWS	63.2	72.5	0.43	86.2	9.0	54.6	9.15	9.15	3L
800725		K79-5563	SWS	59.6	72.5	0.45	84.8	9.1	55.0	9.16	9.17	2M
800726	URQUIE NURSERY 41	K79-5659	SWS	60.4	72.9	0.42	86.9	10.0	55.9	9.12	9.23	4M
800727		K79-5135	SWS	62.4	71.1	0.45	82.9	8.7	53.9	9.27	9.24	3L
800728		K79-5288	6/ SWS	60.8	73.0	0.43	86.4	8.6	54.4	9.36	9.32	3L
800729		C1017413	SWS	60.4	73.5	0.43	87.4	7.9	54.6	9.30	9.18	2L
800730		K79-5557	SWS	62.0	72.4	0.44	85.5	9.5	54.5	9.41	9.47	3L
800731	NURSERY 42	K79-5592	SWS	59.2	72.1	0.45	84.1	9.4	54.7	9.34	9.38	2M
800732		K79-5559	SWS	61.2	74.4	0.40	90.2	9.0	53.6	9.45	9.45	3L
800733		K79-5561	SWS	57.6	71.5	0.42	85.2	9.0	52.9	9.40	9.40	2L
800734		K79-5316	5/ SWS	63.2	72.9	0.37	90.6	8.6	53.2	9.56	9.52	2L
800735		K79-5326	5/ SWS	62.4	72.7	0.39	88.8	8.8	54.0	9.56	9.54	2L

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PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>		<u>4/</u>	
800736		K79-5496	SWS	60.8	71.1	0.39	86.6	8.4	52.9	9.24	9.17	3L
800737		K79-5332	<u>6/</u> SWS	62.4	72.7	0.40	88.4	8.8	52.7	9.29	9.27	3L
800738		K79-5280	<u>6/</u> SWS	61.6	73.4	0.41	88.6	9.1	53.2	9.20	9.21	3L

COMMENTS: NURSERY #31-#32: Most of the selections from these two nurseries were superior to Urquie in overall quality. NURSERY # 33-#34: Selections K79-5652, 5613, 5599, and 5656 were 1-2% lower in flour yield and down in overall milling quality compared to Urquie. NURSERY #35-#38: Several selections in this group, not noted with footnotes, were questionable in milling quality. NURSERY #39-#40: Selection K79-5337 is outstanding in milling quality. Others not footnoted are questionable in milling quality. NURSERY #41-#42: There are several particularly promising selections in this group.

NURSCO 34

PULLMAN, WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FFROF	MABSC	CODI	CODIC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>		<u>4/</u>	
800739	URQUIE Nursery #30	C1017413	SWS	63.2	74.6	0.40	90.8	9.8	55.2	9.27	9.36	2M
800740		K7905234	<u>5/</u> SWS	59.6	74.8	0.38	92.0	8.3	54.3	9.37	9.30	3L
800741		K7905236	<u>5/</u> SWS	59.6	74.9	0.37	92.9	8.4	54.1	9.55	9.48	3L
800742		K7905237	<u>5/</u> SWS	58.8	74.3	0.38	91.7	8.8	53.7	9.29	9.27	3L
800743		K7905239	<u>5/</u> SWS	59.2	74.3	0.38	91.7	8.8	54.2	9.51	9.49	3L
800744		K7905240	<u>6/</u> SWS	59.6	74.2	0.40	90.0	9.0	53.4	9.26	9.26	3L
800745		K7905241	<u>6/</u> SWS	58.0	73.2	0.41	88.5	9.2	54.2	9.24	9.26	4L
800746		K7905243	<u>5/</u> SWS	60.0	75.2	0.38	92.4	8.0	53.0	9.37	9.26	3L
800747		K7905245	<u>5/</u> SWS	59.2	73.9	0.38	90.7	8.6	54.0	9.22	9.18	3L
800748		K7905251	<u>6/</u> SWS	61.2	74.4	0.45	87.1	8.1	54.4	9.25	9.15	2M
800749		K7905252	<u>6/</u> SWS	60.8	74.0	0.43	87.7	8.2	53.8	9.44	9.35	2L
800750		K7905317	<u>6/</u> SWS	62.8	72.7	0.38	89.2	9.1	55.0	9.61	9.62	3L
800751		K7905328	SWS	60.0	73.7	0.45	86.1	8.9	54.5	9.20	9.19	2M
800752		K7905333	<u>6/</u> SWS	63.2	73.5	0.36	91.6	9.2	54.8	9.37	9.40	3M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

4/ Observed Values Corrected to 9% Protein.

COMMENTS: This group of soft white spring selections have exceptional overall quality. Urquie, the check variety, too was unusually good. Judgement was made compared to Urquie. Selection K7905328 was sufficiently low in flour yield and high in flour ash to be questionable.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 35

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI
						1/			3/		
800753	URQUIE	C1017413	SWS	59.5	73.1	0.40	83.9	7.1	52.0	2L	9.19
800754	WAMPUM	C1017691	HRS	61.5	72.6	0.42	85.2	9.0	55.7	4M	8.54
800756		K7806155	SWS	59.0	73.1	0.41	83.7	7.9	51.7	3L	9.14
800757		K7806271	SWS	57.9	75.2	0.42	86.7	7.8	52.3	5L	8.89
800758		K7806293	SWS	60.1	72.9	0.38	84.8	8.4	53.4	3L	8.85
800759		K7806294	SWS	59.2	73.4	0.38	86.6	8.2	53.5	6L	8.62
800760		K7806306	SWS	59.9	72.6	0.39	85.4	8.4	54.1	4L	8.80
800761		K7806310	SWS	59.4	72.4	0.39	84.8	8.5	52.6	4L	8.99
800762		K7806315	SWS	57.8	70.1	0.37	81.7	7.9	53.2	3L	9.37
800763		K7806316	SWS	58.3	70.8	0.37	82.6	7.4	51.7	5L	8.87
800764		K7806333	SWS	58.3	71.2	0.39	81.8	7.4	53.9	3L	8.95
800765		K7806337	SWS	60.0	73.5	0.41	85.2	8.0	52.6	6L	8.92
800766		K7806340	SWS	60.1	74.0	0.41	86.9	8.1	53.4	6L	8.84
800767		K7806427	SWS	58.3	71.0	0.39	82.7	8.0	53.1	5L	8.84
800768		K7806508	SWS	62.6	72.7	0.39	84.5	7.8	53.9	3L	9.04
800769		K7806623	SWS	61.7	68.5	0.40	78.2	7.8	53.2	3L	9.12
800770		K7806789	SWS	58.4	72.1	0.44	80.1	7.6	51.5	3L	9.15
800771		K7806806	SWS	59.0	71.8	0.42	80.2	7.8	52.9	4L	9.12
800772		K7806821	SWS	59.3	68.6	0.42	77.5	8.2	53.8	3L	8.84
800773		K7806835	SWS	59.3	69.5	0.42	78.2	7.6	50.2	3L	9.21
800774		K7400297	SWS	60.8	73.1	0.43	83.6	8.2	54.4	6L	8.40
800775		K7806647	SWS	59.7	75.5	0.49	86.2	9.1	52.2	2M	8.55

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

4/ Observed Values Corrected to 8% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: The selections with promising overall dual purpose properties (both good bread and pastry baking) are identified with footnotes. The deficiencies of the other selections for dual properties are noted under Remarks column. Selections K7806623 and K7806821 have good baking characteristics but were judged too poor in milling quality.

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PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	CODIC	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	REMARKS
				4/		3/			4/		
800753	URQUIE	C1017413	SWS	9.09	53.3	54.2	1.9	785	839	8	
800754	WAMPUM	C1017691	HRS	8.62	60.9	59.9	3.5	950	888	2	
800756		K7806155	SWS	9.13	55.8	55.9	2.9	876	882	3	LOW LVOL & BCRGR
800757		K7806271	SWS	8.87	55.3	55.5	2.5	835	847	5	LOW LVOL & BCRGR
800758		K7806293	SWS	8.89	56.0	55.6	2.0	890	866	4	LOW LVOL & BCRGR
800759		K7806294	SWS	8.65	56.4	56.2	3.0	860	848	2	LOW CODI
800760		K7806306	SWS	8.84	58.7	58.3	3.1	905	881	2	
800761		K7806310	SWS	9.04	57.3	56.8	3.7	900	870	2	BCRGR
800762		K7806315	SWS	9.36	54.1	54.2	2.1	849	855	4	LOW FYELD, LVOL, BCRGR
800763		K7806316	SWS	8.81	54.3	54.9	3.4	861	897	4	LOW FYELD, BCRGR
800764		K7806333	SWS	8.88	57.5	58.1	3.5	802	838	6	LOW FYELD, LVOL, BCRGR
800765		K7806337	SWS	8.92	55.8	55.8	5.2	805	805	4	LOW LVOL, BCRGR
800766		K7806340	SWS	8.85	56.7	56.6	4.9	823	817	4	LOW LVOL, BCRGR
800767		K7806427	SWS	8.84	57.3	57.3	3.9	852	852	2	LOW FYELD
800768		K7806508	SWS	9.02	57.9	58.1	3.2	885	897	2	
800769		K7806623	SWS	9.10	52.0	52.2	2.5	885	897	3	LOW FYELD
800770		K7806789	SWS	9.11	54.3	54.7	3.0	865	889	5	POOR BCRGR
800771		K7806806	SWS	9.10	56.4	56.6	3.5	915	927	2	
800772		K7806821	SWS	8.86	56.2	56.0	2.8	944	932	2	LOW FYELD
800773		K7806835	SWS	9.17	52.0	52.4	2.1	902	926	4	LOW BCRGR, FYELD
800774		K7400297	SWS	8.42	58.8	58.6	4.9	848	836	2	POOR CODI
800775		K7806647	SWS	8.67	56.5	55.4	1.6	895	829	2	LOW LVOL, CODI

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LIND, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH <u>1/</u>	MSCOR	FPROT <u>1/</u>	MABSC <u>3/</u>	MTYPE	CODI
800776	URQUIE	C1017413	SWS	61.0	74.6	0.51	80.3	9.5	56.9	2M	8.79
800777	WAMPUM	C1017691	HRS	61.2	73.7	0.48	82.7	11.1	61.6	4H	8.25
800779		K7806155	SWS	57.3	71.3	0.50	76.7	11.1	57.6	2H	8.57
800780		K7806271	SWS	57.1	71.1	0.48	76.0	10.2	58.9	4M	8.61
800781		K7806293	6/ SWS	60.0	71.9	0.43	80.1	10.8	59.0	3M	8.65
800782		K7806294	6/ SWS	60.0	72.3	0.43	81.0	11.0	58.6	4M	8.67
800783		K7806306	6/ SWS	59.9	72.3	0.45	80.7	11.1	58.3	3M	8.60
800784		K7806310	5/ SWS	59.2	72.2	0.44	80.0	10.4	58.1	6M	8.80
800785		K7806315	5/ SWS	60.6	72.1	0.42	81.5	9.6	57.2	3M	9.22
800786		K7806316	6/ SWS	59.8	72.7	0.42	82.1	10.1	56.2	4M	8.69
800787		K7806333	SWS	58.3	72.5	0.48	78.4	9.8	56.5	3M	8.74
800788		K7806337	6/ SWS	59.3	72.8	0.50	78.0	11.1	57.9	6M	8.61
800789		K7806340	6/ SWS	59.2	73.2	0.50	78.9	11.1	57.7	6M	8.60
800790		K7806427	6/ SWS	57.3	71.4	0.49	76.6	10.6	57.8	4M	8.67
800791		K7806508	SWS	61.0	72.9	0.48	79.0	10.9	56.9	3M	8.49
800792		K7806623	SWS	61.4	70.0	0.48	73.4	11.0	58.9	2H	8.41
800793		K7806789	SWS	60.0	70.9	0.51	74.1	10.3	56.6	3M	8.81
800794		K7806806	SWS	59.3	70.4	0.47	75.5	9.7	57.9	4M	8.91
800795		K7806821	SWS	60.2	70.3	0.49	74.9	10.2	56.5	2M	8.64
800796		K7806835	SWS	59.0	69.6	0.47	73.6	10.0	56.9	3M	8.79
800797		K7400297	SWS	59.8	73.7	0.49	80.0	10.3	57.0	4M	8.16
800798		K7806647	HWS	59.2	73.3	0.51	80.5	10.9	59.3	2M	8.31

1/ Observed Values Corrected to 14% Moisture Basis 5/ Particularly Promising Overall Quality Characteristics.
3/ Absorption at 14% Moisture Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.
4/ Observed Values Corrected to 10% Protein.

COMMENTS: The entire nursery is high in flour ash which has lowered milling scores. Selection K7806806 is excellent in dual purpose baking properties but is very questionable in milling.

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LIND, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	CODIC 4/	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	Remarks
800776	URQUIE	C1017413	SWS	8.73	56.9	57.4	1.0	910	940	8	
800777	WAMPUM	C1017691	HRS	8.34	64.9	63.8	4.1	1041	973	2	low MSCOR, BCRGR
800779		K7806155	SWS	8.70	57.9	56.8	2.1	1030	964	4	low MSCOR
800780		K7806271	SWS	8.63	59.8	59.6	4.0	1006	994	2	
800781		K7806293	SWS	8.74	60.5	59.7	2.7	1007	959	2	
800782		K7806294	SWS	8.78	61.8	60.8	2.9	988	928	2	
800783		K7806306	SWS	8.72	61.6	60.5	2.6	991	925	2	
800784		K7806310	SWS	8.84	60.7	60.3	4.5	1031	1007	2	
800785		K7806315	SWS	9.18	57.5	57.9	2.6	951	975	2	
800786		K7806316	SWS	8.70	58.5	58.4	4.0	1008	1002	2	
800787		K7806333	SWS	8.72	57.5	57.7	2.8	957	969	6	low MSCOR, BCRGR
800788		K7806337	SWS	8.73	61.2	60.1	4.5	1015	949	2	
800789		K7806340	SWS	8.72	61.0	59.9	3.7	993	927	2	
800790		K7806427	SWS	8.74	60.6	60.0	3.2	1023	987	1	Quest. milling
800791		K7806508	SWS	8.59	60.0	59.1	2.8	996	942	4	low CODI, BCRGR
800792		K7806623	SWS	8.52	61.1	60.1	2.2	1040	980	2	low FYELD, CODI
800793		K7806789	SWS	8.85	57.9	57.6	2.5	961	943	3	low FYELD
800794		K7806806	SWS	8.88	59.8	60.1	3.3	1055	1073	2	low FYED, EXC BAK
800795		K7806821	SWS	8.66	56.7	56.5	1.5	960	948	4	low FYELD
800796		K7806835	SWS	8.79	58.9	58.9	2.4	1017	1017	4	low FYELD
800797		K7400297	SWS	8.20	61.5	61.2	3.5	1005	987	5	poor CODI
800798		K7806647	HWS	8.38	61.4	60.5	1.5	953	897	2	low CODI, LVOL

NURSCO 38

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/
800822	FIELDER	C1017268	SWS	59.2	70.1	0.40	79.7	7.0	54.8	9.24	9.02
800823	URQUIE	C1017413	SWS	60.0	71.8	0.39	82.6	7.8	53.3	9.51	9.38
800824		K7801348	HWS	61.9	74.0	0.37	89.5	8.5	58.0	8.82	8.78
800825		K7805055	HWS	59.9	72.6	0.43	84.9	8.7	58.6	8.30	8.28
800826		K7805141	HWS	62.2	70.6	0.42	82.2	9.6	59.2	8.30	8.35
800827		K7805193	HWS	62.9	71.7	0.38	86.2	9.6	61.0	8.29	8.34

USDA, SEA AR
WESTERN WHEAT
PULLMAN, WA.

ADVANCED SOFT WHITE SPRING EXP 71

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PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	MTYPE	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
800822	FIELDER	C1017268	SWS	1L					0	
800823	URQUIE	C1017413	SWS	2L					0	
800824		K7801348	HWS	6L	58.9	59.4	5.5	965	996	2
800825		K7805055	HWS	8M	61.2	61.5	4.8	955	974	3
800826		K7805141	HWS	7M	63.7	63.1	4.4	893	856	3
800827		K7805193	HWS	8M	66.0	65.4	8.3	995	958	2

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

4/ Observed Values Corrected to 9% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: All four selections in the nursery were determined to be of hard endosperm. Selection K7801348 is interesting by its dual purpose properties. The other three selections were distinctly bread types, and all made good bread for their protein levels. K7805193 appears promising as a hard white spring wheat.

HURSCO . 39

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
800828	FIELDER	C1017268	SWS	58.0	71.5	0.44	80.5	8.2	54.2	9.00	8.91	3M
800829	URQUIE	C1017413	SWS	58.6	73.1	0.45	81.3	8.0	54.0	9.03	8.92	2L
800830	WS-1	C1017347	SWS	59.8	68.4	0.38	79.4	8.6	54.9	9.24	9.19	6L
800831	DIRKWIN	C1017745	SWS	57.8	70.3	0.46	77.7	8.2	55.3	8.87	8.79	1L
800832	WALLADAY	C1017759	SWS	57.3	67.1	0.41	74.5	7.8	56.0	8.95	8.82	5L
800833		WA 6402 <u>6/</u>	SWS	58.9	71.1	0.40	82.3	8.7	56.4	8.87	8.84	3L
800834		WA 6616 *	HRS	62.0	69.6	0.41	80.7	9.8	60.9	8.36	8.43	4M
800835		WA 6618 <u>6/</u>	SWS	60.1	69.5	0.41	79.1	8.7	57.6	9.02	8.99	2L
800836		WA 6753 <u>5/</u>	SWS	60.6	72.2	0.42	83.3	8.7	55.1	8.80	8.77	2L
800837		ID 185 <u>6/</u>	SWS	60.9	70.2	0.38	81.7	8.0	54.8	9.32	9.21	2L
800838		K7805555 <u>6/</u>	SWS	58.3	71.7	0.40	82.6	9.1	54.8	8.85	8.86	3L
800839		K7805580	SWS	58.0	69.5	0.42	77.5	9.5	55.1	9.04	9.09	2M
800840		K7805586	SWS	56.7	69.2	0.44	75.3	10.3	55.0	8.99	9.13	3M
800841		K7805753 <u>6/</u>	SWS	56.8	70.8	0.40	81.0	8.8	54.0	8.84	8.82	5L
800842		K7806652 <u>6/</u>	SWS	57.3	70.8	0.38	81.9	8.4	54.6	9.04	8.97	3L
800843		K7806653 <u>6/</u>	SWS	59.8	70.8	0.37	82.6	9.5	55.6	8.97	9.03	3M
800844		K7806654 <u>6/</u>	SWS	60.1	71.6	0.38	83.7	9.3	56.4	8.92	8.96	3M
800845		K7806656 <u>5/</u>	SWS	61.3	71.4	0.37	83.6	10.1	56.9	9.10	9.22	2M
800846		K7807010 <u>6/</u>	SWS	60.0	70.0	0.36	82.2	8.8	54.9	9.01	8.99	5L

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 9% Protein.4/ Observed Values Corrected to 9% Protein.

COMMENTS: Walladay was abnormally poor in milling quality.

Urquie. WA6618 was judged as a HRS. WA6618 is marginal in milling quality. K7805580 and K7805586 were low in flour yield. All other selections appear promising with K7806656 the outstanding sample.

*WA6166, a HRS selection, was tested for bread baking quality and gave the following results: BABSC 63.9; MTIME 4.0; LVOL 1055; and BCRGR 3

5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

NURSCO 40

SOILS FARM PULLMAN,W

R.F. LINE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC
						<u>1/</u>		<u>1/</u>	<u>3/</u>		<u>4/</u>
800847	LEMHI	C1011415	SWS	60.8	75.4	0.48	86.6	8.8	52.4	9.26	9.24
800848	LEMHI (TREATED)	C1011415	SWS	62.4	75.0	0.48	86.1	9.7	52.4	9.19	9.26
800849	MARFED	C1011919	SWS	62.8	73.6	0.45	86.1	8.6	57.0	9.44	9.40
800850	MARFED (TREATED)	C1011919	SWS	63.2	71.9	0.44	84.3	8.8	56.9	9.14	9.12
800851	TWIN	C1014588	SWS	61.2	73.9	0.48	84.5	8.8	53.7	9.25	9.22
800852	TWIN (TREATED)	C1014588	SWS	61.2	73.7	0.47	84.8	8.9	53.6	9.26	9.25
800853	SPRINGFIELD	C1014589	SWS	61.6	74.8	0.43	88.9	8.6	52.9	9.40	9.38
800854	SPRINGFIELD (TREATED)	C1014589	SWS	62.0	74.7	0.43	88.8	8.4	52.6	9.29	9.22
800855	WARED	C1015926	HRS	63.2	73.1	0.43	86.4	10.6	58.7	8.55	8.68
800856	WARED (TREATED)	C1015926	HRS	65.6	75.4	0.40	90.0	11.1	60.4	8.64	8.81
800857	BORAH	C1017267	HRS	64.0	72.8	0.36	89.8	11.0	60.4	8.71	8.87
800858	BORAH (TREATED)	C1017267	HRS	63.6	72.6	0.37	88.8	11.1	60.3	8.47	8.64
800859	FIELDER	C1017268	SWS	59.6	71.4	0.42	85.3	9.4	52.3	9.12	9.17
800860	FIELDER (TREATED)	C1017268	SWS	63.6	73.7	0.41	88.6	9.0	52.6	9.19	9.19
800861	URQUIE	C1017413	SWS	64.0	74.7	0.45	87.6	7.6	53.0	9.46	9.31
800862	URQUIE (TREATED)	C1017413	SWS	64.4	75.1	0.45	88.3	8.1	53.5	9.31	9.21
800863	FIELDWIN	C1017425	SWS	60.4	71.3	0.46	82.4	10.5	54.4	8.86	9.03
800864	FIELDWIN (TREATED)	C1017425	SWS	65.6	74.0	0.39	90.5	8.9	52.1	9.13	9.12
800865	WAMPUM	C1017269	HRS	62.4	72.3	0.41	86.6	10.0	57.5	9.05	9.13
800866	WAMPUM (TREATED)	C1017269	HRS	62.8	73.1	0.40	87.7	9.7	58.9	8.81	8.87
800867	DIRKWIN	C1017745	SWS	60.8	73.2	0.48	83.9	9.1	49.3	9.05	9.06
800868	DIRKWIN (TREATED)	C1017745	SWS	61.6	73.6	0.49	83.9	8.8	49.7	9.04	9.02
800869	WALLADAY	C1017759	SWS	62.4	70.9	0.45	83.0	7.8	56.7	9.21	9.08
800870	WALLADAY (TREATED)	C1017759	SWS	63.2	71.1	0.44	83.9	8.0	56.0	9.06	8.95

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 9% Protein.4/ Observed Values Corrected to 9% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS: The influence of treatment with Bayleton and Indar on these 12 spring wheat varieties was not clearly as pronounced as in the 12 winter varieties (See Nursery Code 042). A small increase in test weight of the treated samples is generally observed and some varieties followed with improved flour yield and milling score. Five of the varieties gave slightly improved cookie diameters with the treatment while seven did not. The bread baking results of the 3 HRS varieties were not significantly different.

NURSCO 40

SOILS FARM PULLMAN, W

R.F. LINE

LABNUM	VARIETY	IDNO	CLASS	MTYPE	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR
						<u>3/</u>			<u>4/</u>	
800847	LEMHI	CI011415	SWS	2M						
800848	LEMHI (TREATED)	CI011415	SWS	2M						
800849	MARFED	CI011919	SWS	3L						
800850	MARFED (TREATED)	CI011919	SWS	3L						
800851	TWIN	CI014588	SWS	2M						
800852	TWIN (TREATED)	CI014588	SWS	2M						
800853	SPRINGFIELD	CI014589	SWS	2M						
800854	SPRINGFIELD (TREATED)	CI014589	SWS	2M						
800855	WARED	CI015926	HRS	4M	64.0	62.4	3.9	1075	976	2
800856	WARED (TREATED)	CI015926	HRS	4M	66.7	64.6	4.5	1080	950	2
800857	BORAH	CI017267	HRS	3M	66.6	64.6	3.8	1063	939	2
800858	BORAH (TREATED)	CI017267	HRS	4M	66.6	64.5	2.4	1050	920	2
800859	FIELDER	CI017268	SWS	1M						
800860	FIELDER (TREATED)	CI017268	SWS	1M						
800861	URQUIE	CI017413	SWS	2M						
800862	URQUIE (TREATED)	CI017413	SWS	2M						
800863	FIELWIN	CI017425	SWS	2M						
800864	FIELWIN (TREATED)	CI017425	SWS	2M						
800865	WAMPUM	CI017269	HRS	4M	62.7	61.7	4.3	1040	978	2
800866	WAMPUM (TREATED)	CI017269	HRS	4M	63.8	63.1	3.2	1057	1014	2
800867	DIRKWIN	CI017745	SWS	1M						
800868	DIRKWIN (TREATED)	CI017745	SWS	2M						
800869	WALLADAY	CI017759	SWS	6L						
800870	WALLADAY (TREATED)	CI017759	SWS	6L						

NURSCO 42

SOILS FARM PULLMAN,W

R.F. LINE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
800898	GAINES	C1013448	SWW	56.0	70.5	0.57	74.6	9.2	57.4	8.75	8.78	3M
800899	GAINES (TREATED)	C1013448	SWW	61.6	73.7	0.49	83.8	9.0	56.6	9.02	9.02	2M
800900	NUGAINES	C1013968	SWW	57.2	71.0	0.49	80.3	9.5	57.0	8.87	8.93	3M
800901	NUGAINES (TREATED)	C1013968	SWW	61.2	74.0	0.46	86.1	9.0	57.5	8.89	8.89	2M
800902	HYSLOP	C1014564	SWW	57.2	73.4	0.53	80.5	9.5	56.5	8.77	8.84	3L
800903	HYSLOP (TREATED)	C1014564	SWW	60.4	74.7	0.51	84.0	9.4	56.6	8.84	8.88	3L
800904	MCDERMID	C1014565	SWW	58.0	73.0	0.52	80.9	8.9	56.1	8.77	8.76	2L
800905	MCDERMID (TREATED)	C1014565	SWW	60.8	74.1	0.47	85.2	8.9	56.4	9.07	9.06	2L
800906	LUKE	C1014586	SWW	57.2	73.6	0.49	83.4	8.9	56.7	9.01	9.00	3M
800907	LUKE (TREATED)	C1014586	SWW	60.0	74.9	0.45	87.5	8.9	57.4	9.26	9.25	3M
800908	BARBEE	C1017417	CLUB	53.2	71.8	0.52	79.7	10.1	53.0	9.01	9.09	2M
800909	BARBEE (TREATED)	C1017417	CLUB	60.0	73.8	0.48	84.5	9.2	52.2	9.20	9.21	1M
800910	DAWS	C1017419	SWW	56.8	70.6	0.53	77.4	10.3	55.3	8.54	8.68	3M
800911	DAWS (TREATED)	C1017419	SWW	61.6	73.8	0.48	84.7	9.3	55.0	8.70	8.73	3M
800912	STEPHENS	C1017569	SWW	58.0	74.0	0.52	82.5	9.4	55.7	9.02	9.07	2M
800913	STEPHENS (TREATED)	C1017569	SWW	60.4	75.6	0.48	86.5	9.0	56.3	8.77	8.77	2M
800914	FARO	C1017590	CLUB	53.6	72.6	0.53	79.6	9.9	52.7	9.07	9.14	2M
800915	FARO (TREATED)	C1017590	CLUB	59.2	75.3	0.47	87.2	9.2	53.3	8.90	8.91	2M
800916	WALLADAY	C1017759	SWS	54.8	68.1	0.51	75.3	8.6	57.2	8.70	8.66	3L
800917	WALLADAY (TREATED)	C1017759	SWS	61.6	72.2	0.44	85.2	9.8	56.0	9.06	9.15	4M
800918	TYEE	C1017773	CLUB	57.2	73.6	0.46	85.7	9.4	52.7	9.12	9.15	2M
800919	TYEE (TREATED)	C1017773	CLUB	60.4	74.6	0.42	89.6	9.6	52.7	9.12	9.17	2M
800920	JACMAR		CLUB	57.6	74.1	0.47	85.6	9.5	53.1	9.43	9.47	2M
800921	JACMAR (TREATED)		CLUB	55.2	70.1	0.48	80.0	9.2	54.4	9.11	9.12	3M

AVERAGES: NO TREATMENT

56.4 72.2

80.5

9.4

8.92

TREATED

60.2 73.9

85.4

9.2

9.00

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

4/ Observed Values Corrected to 9% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Treatment of these 12 winter varieties with Bayleton and Indar significantly improved all of the milling and baking factors tested. Most strikingly was the improvement in milling score which is influenced by the test weight, flour yield, and flour ash. The improvement in cookie spread is partially due to the lower protein. The pair of Jacmar samples appear to be switched as it is the only variety that did not follow this trend.

NURSCO 43

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	BABS
800922	FEDERATION										
800923	TWIN	C1004734	SWS	58.6	72.6	0.45	82.2	7.8	52.8	2L	
800924	WAZA	C1014588	SWS	58.8	71.3	0.47	79.0	8.3	53.5	2	
800925	WARED	C1015284	HRS	62.8	72.9	0.44	83.9	8.6	62.0	2M	63.0
800926	BORAH	C1015926	HRS	62.6	72.9	0.48	82.5	9.1	61.9	6M	63.4
		C1017267	HRS	63.0	72.3	0.43	83.6	10.0	62.8	4M	65.2
800927	FIELDER										
800928	PROFIT 75	C1017268	SWS	57.4	72.3	0.43	81.7	8.6	53.4	2M	
800929	PROSPUR	C1017348	HRS	63.2	74.3	0.47	85.5	8.8	62.5	6M	63.7
800930	URQUIE	C1017408	HRS	63.4	73.2	0.46	83.8	8.3	65.2	8M	66.4
800931	SAWTELL	C1017413	SWS	61.1	74.0	0.46	83.0	7.6	53.3	2M	
		C1017424	HRS	60.7	73.6	0.49	82.8	9.0	60.7	4M	62.1
800932	FIELDWIN										
800933	WAMPUM	C1017425	SWS	57.9	72.3	0.44	82.3	8.5	54.4	2M	
800934	DIRKWIN	C1017691	HRS	61.4	73.0	0.48	82.6	8.7	61.5	6M	62.6
800935	WALLADAY	C1017745	SWS	57.8	72.5	0.48	79.7	8.2	54.3	2M	
800936	POWELL	C1017759	SWS	58.1	70.9	0.45	78.7	8.0	53.2	3L	
		C1017761	HRS	56.7	69.7	0.47	78.1	8.6	60.6	6L	62.1
800937	TWIN #3//227196/A63166S	ID 105	SWS	58.3	71.3	0.46	78.8	8.1	53.1	2L	
800938	A 7136S-5-2-3	ID 144	SWS	57.1	71.5	0.44	80.5	8.6	55.0	3M	
800939	BORAH/3/11-60-101//TZPP/SN64	ID 153	HRS	61.7	70.6	0.47	78.1	8.4	62.1	7M	62.9
800940	MRN/TBR66/3/TZPP/AN3//B61-136AB SEL1	ID 167	HRS	62.2	73.3	0.46	83.6	9.5	59.3	6M	61.2
800941	HYSLOP/FIELDER	ID 172	SWS	59.2	71.9	0.45	79.7	8.5	54.0	3M	

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 9% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 9% Protein.

COMMENTS: ID105, ID144, ID153 and ID172 are questionable in milling performance. They are lower in flour yield than the long list of current varieties with which they were grown. ID153 is also very poor in breadmaking.

The other selections were satisfactory in baking characteristics.

NURSCO 43

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/
800922	FEDERATION	CI004734	SWS				0		8.69	8.56
800923	TWIN	CI014588	SWS				0		9.12	9.01
800924	ANZA	CI015284	HRS	63.4	2.1	810	834	8	8.19	8.16
800925	WARED	CI015926	HRS	63.3	2.9	1040	1034	2	8.01	8.02
800926	BORAH	CI017267	HRS	64.2	2.8	990	928	2	7.96	8.04
800927	FIELDER	CI017268	SWS				0		8.99	8.95
800928	PROFIT 75	CI017348	HRS	63.9	3.2	935	947	2	8.26	8.25
800929	PROSPUR	CI017408	HRS	67.1	4.9	840	883	4	7.74	7.68
800930	URQUIE	CI017413	SWS				0		8.99	8.84
800931	SAWTELL	CI017424	HRS	62.1	3.1	960	960	2	8.06	8.06
800932	FIELDWIN	CI017425	SWS				0		8.92	8.86
800933	WAMPUM	CI017691	HRS	62.9	4.6	1015	1034	2	8.40	8.38
800934	DIRKWIN	CI017745	SWS				0		8.64	8.55
800935	WALLADAY	CI017759	SWS				0		9.10	8.99
800936	POWELL	CI017761	HRS	62.5	4.2	955	980	6	7.84	7.81
800937	TWIN *3//227196/A63166S	ID 105	SWS				0		9.18	9.08
800938	A 7136S-5-2-3	ID 144	SWS				0		8.71	8.66
800939	BORAH/3/11-60-101//TZPP/SNG4	ID 153	HRS	63.5	4.0	805	842	8	7.96	7.91
800940	MRN/TBR66/3/TZPP/AN3//B61-136AB SEL1	ID 167	HRS	60.7	4.3	1030	999	2	8.15	8.19
800941	HYSLOP/FIELDER	ID 172	SWS				0		9.12	9.06

NURSCO 44

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH <u>1/</u>	MSCOR	FPROT <u>1/</u>	MABSC <u>3/</u>	MTYPE	BABS
800942	FEDERATION	CI004734	SWS	57.4	69.2	0.44	75.4	9.3	55.0	3M	
800943	FORTUNA	CI043596	HRS	59.4	70.6	0.45	80.0	11.1	64.1	4H	66.6
800944	TWIN	CI014588	SWS	57.7	68.4	0.44	74.3	9.6	54.8	2M	
800945	ANZA	CI015284	HRS	62.1	71.0	0.44	81.6	9.4	62.5	3M	63.3
800946	WARD	CI015926	HRS	60.3	71.8	0.50	79.5	10.1	60.7	4M	62.2
800947	BORAH	CI017267	HRS	61.6	71.1	0.42	82.6	10.8	64.1	4H	66.3
800948	FIELDER	CI017268	SWS	58.7	68.8	0.38	76.9	9.5	56.2	3M	
800949	PROFIT 75	CI017348	HRS	60.7	73.3	0.46	84.4	10.3	62.4	6M	64.1
800950	PROSPUR	CI017408	HRS	60.8	71.7	0.43	82.7	10.8	65.5	5H	67.7
800951	URQUIE	CI017413	SWS	59.5	69.6	0.43	75.9	9.8	58.0	3M	
800952	SAWTELL	CI017424	HRS	59.6	70.7	0.44	81.0	9.9	63.5	6H	64.8
800953	FIELDWIN	CI017425	SWS	58.1	70.2	0.40	79.1	9.7	58.0	3M	
800954	SHASTA	CI017651	HRS	61.4	72.4	0.46	82.1	10.9	63.8	4H	66.1
800955	WAMPUM	CI017691	HRS	59.4	69.6	0.46	77.9	10.1	64.3	5H	65.8
800956	DIRKWIN	CI017745	SWS	57.5	72.1	0.48	78.8	9.3	54.7	2M	
800957	WALLADAY	CI017759	SWS	57.6	69.5	0.47	75.1	9.7	56.4	6M	
800958	POWELL	CI017761	HRS	57.0	67.1	0.44	75.5	10.8	62.1	6H	64.3
800959	TWIN #3//227196/A63166S	ID 105	SWS	57.6	70.8	0.46	77.7	9.6	54.2	3M	
800960	A7136S-5-2-3	ID 144	SWS	59.4	71.6	0.42	80.1	9.2	56.7	4M	
800961	BORAH/3//11-60-101//TZPP/SN64	ID 153	HRS	59.8	70.9	0.46	79.8	10.4	65.7	5H	68.0

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.

COMMENTS: The three Idaho selections (ID105, ID144 and ID153) all appear promising in overall quality.

NURSCO 44

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/
800942	FEDERATION									
800943	FORTUNA	C1004734	SWS				0		8.69	8.61
800944	TWIN	C1043596	HRS	65.5	3.7	1060	990	2	7.76	7.85
800945	ANZA	C1014588	SWS				0		9.02	8.96
800946	WARED	C1015284	HRS	63.9	1.8	945	982	5	7.99	7.94
		C1015926	HRS	62.1	4.0	1095	1089	2	8.07	8.08
800947	BORAH									
800948	FIELDER	C1017267	HRS	65.5	3.3	1085	1035	2	7.91	7.98
800949	PROFIT 75	C1017268	SWS				0		8.94	8.88
800950	PROSPUR	C1017348	HRS	63.8	4.5	1060	1041	2	8.21	8.24
800951	URQUIE	C1017408	HRS	66.9	5.7	1035	985	2	7.99	8.06
		C1017413	SWS				0		8.99	8.97
800952	SAWTELL									
800953	FIELDWIN	C1017424	HRS	64.9	7.5	1030	1036	2	7.97	7.97
800954	SHASTA	C1017425	SWS				0		8.86	8.82
800955	WAMPUM	C1017651	HRS	65.2	2.9	1090	1034	4	7.91	7.98
800956	DIRKWIN	C1017691	HRS	65.7	5.0	1110	1104	1	8.40	8.41
		C1017745	SWS				0		8.62	8.54
800957	WALLADAY									
800958	POWELL	C101759	SWS				0		8.76	8.73
800959	TWIN #3//227196/A63166S	C1017761	HRS	63.5	7.4	1120	1070	1	8.01	8.08
800960	A7136S-5-2-3	ID 105	SWS				0		9.11	9.07
800961	BORAH/3/11-60-101//TZPP/SN64	ID 144	SWS				0		8.87	8.79
		ID 153	HRS	67.6	4.4	1005	980	2	7.78	7.81

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PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
						<u>1/</u>		<u>1/</u>	<u>3/</u>		
800962	FEDERATION	C1004734	SWS	57.4	70.5	0.45	77.0	9.4	55.4	2M	
800963	TWIN	C1014588	SWS	57.1	69.7	0.56	71.3	10.6	58.0	2M	
800964	WANDELL	C1015070	HWS	58.4							
800965	ANZA	C1015284	HRS	61.0	70.0	0.48	77.6	10.8	63.2	3M	64.4
800966	WARED	C1015926	HRS	59.2	69.8	0.53	75.4	12.5	63.6	4H	66.5
800967	BORAH	C1017267	HRS	61.7	72.0	0.46	81.6	11.6	66.4	2H	67.4
800968	FIELDER	C1017268	SWS	53.2	66.7	0.51	69.0	10.1	58.2	2M	
800969	PROFIT 75	C1017348	HRS	60.8	71.7	0.50	79.6	11.6	63.9	4H	64.9
800970	PROSPUR	C1017408	HRS	59.5	70.6	0.50	77.4	12.0	66.3	4H	68.7
800971	URQUIE	C1017413	SWS	57.8	72.8	0.50	78.0	10.2	59.2	2M	
800972	FIELDWIN	C1017425	SWS	57.4	69.3	0.53	72.9	10.9	58.9	2M	
800973	CONDO	C1017438	SWS	58.6							
800974	WAMPUM	C1017691	HRS	59.5	70.4	0.50	77.0	11.7	65.9	4H	67.0
800975	DIRKWIN	C1017745	SWS	59.6	70.7	0.59	71.0	10.7	58.2	2M	
800976	WALLADAY	C1017759	SWS	53.9	67.3	0.53	69.0	10.3	58.7	4M	
800977	POWELL	C1017761	HRS	53.7	67.6	0.49	73.7	11.5	63.3	4H	65.2
800978	TWIN #3//227196/A63166S	ID 105	SWS	54.7	69.8	0.60	70.1	10.8	56.4	2M	
800979	FIELDER/A6514SA-102-1	ID 138	SWS	60.0	71.5	0.49	78.3	10.3	58.3	2M	
800980	A7136S-5-2-3	ID 144	SWS	54.8	68.8	0.52	72.6	10.1	57.9	2M	
800981	BORAH/3//1160-101//TZPP/SN64	ID 153	HRS	59.2	69.2	0.54	73.2	11.8	67.5	3H	69.7
800982	MRN/TBR66/3/TZPP/AN3//B61-136AB. SEL 1	ID 167	HRS	60.8	72.3	0.49	81.1	11.6	62.3	4H	64.3
800983	MINN/TBR66/3/TZPP/AN3//B61-136AB. SEL 1	ID 170	HRS	62.1	73.7	0.47	84.6	11.7	64.9	3H	67.0
800984	HYSLOP/FIELDER	ID 172	SWS	58.3	71.4	0.52	76.2	10.0	57.9	2M	
800985	ID0053/A6596S-A-21-1	ID 183	SWS	60.1	72.1	0.51	77.4	11.3	58.0	2M	
800986	A7240S-38-2	ID 186	SWS	54.3	67.9	0.55	70.0	10.8	59.4	2M	

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.

COMMENTS: Selections ID105 and ID186 are questionable in milling quality, but it may be a reflection of the low test weight, which generally was characteristic for the nursery. Selections ID153 and ID170 (HRS's) gave a bread crumb grain that was coarse and undesirable.

NURSCO 45

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/
800962	FEDERATION	C1004734	SWS				0		8.81	8.64
800963	TWIN	C1014588	SWS				0		8.66	8.60
800964	WANDELL	C1015070	HWS							
800965	ANZA	C1015284	HRS	64.6	1.7	1075	1087	3	8.02	8.01
800966	WARED	C1015926	HRS	65.0	3.3	1225	1132	2	8.01	8.13
800967	BORAH	C1017267	HRS	66.8	2.8	1135	1098	2	7.91	7.96
800968	FIELDER	C1017268	SWS				0		8.66	8.56
800969	PROFIT 75	C1017348	HRS	64.3	3.3	1070	1033	2	8.14	8.19
800970	PROSPUR	C1017408	HRS	67.7	3.3	1145	1083	1	7.87	7.95
800971	URQUIE	C1017413	SWS				0		8.67	8.59
800972	FIELDWIN	C1017425	SWS				0		8.66	8.65
800973	CONDO	C1017438	SWS							
800974	WAMPUM	C1017691	HRS	66.3	3.5	1160	1117	2	8.09	8.14
800975	DIRKWIN	C1017745	SWS				0		8.39	8.35
800976	WALLADAY	C1017759	SWS				0		8.47	8.40
800977	POWELL	C1017761	HRS	64.7	3.3	1175	1144	3	7.77	7.81
800978	TWIN #3//227196/A63166S	ID 105	SWS				0		8.60	8.58
800979	FIELDER/A6514SA-102-1	ID 138	SWS				0		8.79	8.72
800980	A7136S-5-2-3	ID 144	SWS				0		8.57	8.48
800981	BORAH/3/1160-101//TZPP/SN64	ID 153	HRS	68.9	2.8	1015	965	4	7.51	7.58
800982	MRN/TBR66/3/TZPP/AN3//B61-136AB. SEL 1	ID 167	HRS	63.7	3.4	1130	1093	1	8.05	8.10
800983	MINN/TBR66/3/TZPP/AN3//B61-136AB. SEL 1	ID 170	HRS	66.3	3.2	1100	1057	4	8.01	8.07
800984	HYSLOP/FIELDER	ID 172	SWS				0		8.77	8.66
800985	ID0053/A6596S-A-21-1	ID 183	SWS				0		8.61	8.65
800986	A7240S-38-2	ID 186	SWS				0		8.55	8.53

NURSCO 46

ROYAL SLOPE, WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
800987	WARD NURSERY #17									
800988	BORAH	C1015926	HRS	63.6	72.3	0.48	81.2	10.1	64.3	6M
800989	WAMPUM	C1017267	HRS	63.6	71.0	0.51	76.9	10.7	65.8	4H
800990		C1017691	HRS	63.7	71.9	0.45	82.5	11.4	66.5	3H
800991		K74102022	6/HRS	63.1	71.9	0.46	81.0	12.2	68.2	3H
		K74127337	6/HRS	63.3	74.2	0.49	83.0	12.7	68.7	4H
800992		K74127339	6/HRS	64.0	75.0	0.46	86.2	11.9	68.9	5H
800993		K74127422	5/HRS	63.4	74.0	0.52	82.1	10.9	66.1	6M
800994		K74127429	6/HRS	62.6	73.9	0.43	85.5	12.6	68.8	3H
800995		K74127474	6/HRS	63.8	74.5	0.45	86.3	12.5	69.0	3H
800996	NURSERY #18	K74102023	HRS	63.6	74.1	0.47	84.6	11.4	65.6	2H
800997		K74102056	HRS	62.4	74.4	0.43	87.6	12.2	68.3	2H
800998		K74102071	6/HRS	63.6	73.6	0.47	83.0	11.1	68.4	4H
800999		K74102084	6/HRS	63.3	74.1	0.43	86.3	13.5	69.3	3H
801000		K74102118	6/HRS	63.2	73.3	0.45	83.9	12.2	68.4	4H
801001		K74102134	6/HRS	63.0	74.8	0.46	86.2	12.3	68.6	4H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

COMMENTS: This group of hard red spring selections were generally significantly better in milling quality than the check varieties. Borah's milling score was below normal due to high flour ash. Baking properties of all were good with the exception of K74102023 and K74102056, which were short in milling and questionable in crumb grain structure. Several of the selections were 1-2% higher in protein than the check varieties. K74102084 was highest at 13.5%, but the loaf volume did not respond accordingly.

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

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ROYAL SLOPE, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
800987	WARED NURSERY #17	C1015926	HRS	63.8	65.7	2.9	1000	1118	2
800988	BORAH	C1017267	HRS	66.9	68.2	3.1	1020	1101	2
800989	WAMPUM	C1017691	HRS	67.3	67.9	2.6	1050	1087	2
800990		K74102022	HRS	69.8	69.6	2.4	1050	1038	2
800991		K74127337	HRS	70.8	70.1	2.8	1065	1022	2
800992		K74127339	HRS	72.2	72.3	3.9	1023	1029	2
800993		K74127422	HRS	66.4	67.5	3.2	1050	1118	2
800994		K74127429	HRS	69.8	69.2	2.0	1110	1073	2
800995		K74127474	HRS	69.4	68.9	2.4	1088	1057	2
800996	NURSERY #18	K74102023	HRS	65.4	66.0	1.7	1003	1040	3
800997		K74102056	HRS	65.9	65.7	1.4	1030	1018	3
800998		K74102071B	HRS	67.4	68.3	2.5	1063	1119	2
800999		K74102084	HRS	70.2	68.7	2.4	1115	1022	2
801000		K74102118	HRS	69.0	68.8	2.3	1070	1058	2
801001		K74102134	HRS	69.3	69.0	2.5	1065	1046	2

NURSCO 47

LIND, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH <u>1/</u>	MSCOR	FPROT <u>1/</u>	MABSC <u>3/</u>	MTYPE
801002	WAMPUM									
801003		C1017691	HRS	61.7	72.6	0.45	84.3	9.1	65.8	6M
801004		K7900108	HRS	56.4	68.9	0.46	77.5	12.4	67.7	3H
801005		K7900297	<u>6/</u> HRS	62.0	69.8	0.40	83.2	12.8	68.0	2H
801006		K7900313	HRS	61.4	71.0	0.43	83.0	12.1	67.5	2H
		K7900318	<u>5/</u> HRS	60.9	71.6	0.41	84.5	13.2	68.3	3H
801007		K7900381	HRS	58.4	69.1	0.47	76.8	12.1	68.1	4H
801008		K7900392	<u>6/</u> HRS	60.5	72.9	0.42	85.7	11.2	63.3	3H
801009		K7900395	HRS	60.1	72.2	0.41	85.0	11.0	64.8	3H
801010		K7900534	<u>6/</u> HRS	62.7	71.0	0.45	81.0	12.2	65.0	2H
801011		K7900643	HRS	60.1	69.7	0.47	77.6	11.7	65.3	3H
801012		K7900686	HRS	58.0	68.9	0.46	77.2	11.3	67.2	2H
801013		K7900713	<u>6/</u> HRS	59.7	68.9	0.40	80.7	12.0	65.8	4H
801014		K7900717	<u>6/</u> HRS	60.6	71.4	0.41	84.0	11.3	66.2	5H
801015		K7900727	HRS	60.6	70.0	0.47	78.1	11.1	67.1	4H
801016		K7900729	HRS	59.8	70.1	0.45	79.5	11.6	67.1	4H
801017		K7900733	HRS	61.6	70.8	0.40	83.4	11.7	67.5	2H

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 12% Protein.4/ Observed Values Corrected to 12% Protein.5/

Particularly Promising Overall Quality Characteristics.

6/

Promising Overall Quality characteristics.

Comments:

The following selections were judged as questionable or unsatisfactory in milling quality: K7900108,

381, 643, 686, 727, and 729. Others not identified as promising because of poor flour baking characteristic were: k7900313, 395, 727, and 733. Selection K7900713 was judged with some reservation as to its milling quality (the flour yield was low, but also was its ash content indicating a possibility for a higher extraction). Also noteworthy is the higher protein levels of the experimental selections over Wampum.

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LIND, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
801002	WAMPUM								
801003		C1017691	HRS	64.3	67.2	3.4	1050	1230	2
801004		K7900108	HRS	69.5	69.1	2.4	1110	1085	2
801005		K7900297	HRS	70.2	69.4	2.0	1180	1130	1
801006		K7900313	HRS	68.0	67.9	1.3	1100	1094	2
		K7900318	HRS	70.9	69.7	3.1	1200	1126	1
801007		K7900381	HRS	69.6	69.5	3.4	1175	1169	2
801008		K7900392	HRS	64.9	65.7	2.7	1055	1105	2
801009		K7900395	HRS	65.2	66.2	2.9	990	1052	3
801010		K7900534	HRS	66.6	66.4	2.5	1155	1143	2
801011		K7900643	HRS	67.4	67.7	4.3	1070	1089	2
801012		K7900686	HRS	65.9	66.6	2.3	1110	1153	2
801013		K7900713	HRS	68.7	68.7	4.4	1130	1130	2
801014		K7900717	HRS	67.9	68.6	4.8	1060	1103	2
801015		K7900727	HRS	69.1	70.0	3.5	1060	1116	3
801016		K7900729	HRS	69.1	69.5	3.3	1165	1190	2
801017		K7900733	HRS	67.6	67.9	1.9	1055	1074	2

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ROYAL SLOPE, WA

C. F KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
801018	WARED	C1015926	HRS	64.0	75.0	0.43	88.0	10.3	63.7	4M
801019	BORAH	C1017267	HRS	64.4	74.5	0.39	89.6	10.9	64.8	3M
801020	WAMPUM	C1017691	HRS	63.6	73.9	0.46	85.4	9.8	63.1	6M
801021		K75-20 <u>6/</u>	HRS	63.6	74.7	0.44	87.5	9.7	63.5	7M
801022		K75-40	HRS	62.8	74.4	0.45	86.6	10.3	64.2	8M
801023		K77-6	HRS	63.2	73.2	0.47	84.3	10.1	64.7	4M
801024		K77-13	HRS	63.2	72.7	0.48	83.2	10.5	65.5	6M
801025		K77-15 <u>5/</u>	HRS	62.8	75.9	0.47	87.2	10.8	64.6	4H
801026		K77-16	HRS	63.2	75.1	0.45	87.1	10.4	64.8	2H
801027		K77-106	HRS	63.2	74.1	0.42	87.9	10.1	63.4	3M
801028		K77-108 <u>6/</u>	HRS	64.4	74.7	0.39	89.9	11.0	64.3	3M
801029		K77-376	HRS	64.0	73.1	0.39	88.2	9.3	65.8	7M
801030		K77-603 <u>6/</u>	HRS	63.6	74.8	0.39	89.9	9.4	63.0	6M
801031		K77-613	HRS	64.4	73.8	0.44	86.7	9.5	63.5	4M
801032		K77-623	HRS	63.6	73.0	0.42	86.5	9.3	63.5	6L
801033		K77-700	HRS	65.2	71.8	0.38	87.5	12.6	64.2	2H
801034		K77-708	HRS	64.8	72.3	0.43	85.7	11.9	67.1	5H
801035		WA 6510 <u>6/</u>	HRS	63.6	75.2	0.42	89.0	9.3	64.1	7M
801036		WA 6748 <u>6/</u>	HRS	63.2	75.4	0.42	89.1	10.1	65.6	7M
801037		WA 6749	HRS	62.8	71.6	0.44	84.4	9.7	63.5	4M
801038		WA 6750 <u>6/</u>	HRS	62.8	74.0	0.40	88.6	9.2	63.5	7M
801039		ID 167	HRS	64.0	75.0	0.40	89.9	10.0	62.4	7M

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein. 5/ Particularly Promising Overall Quality Characteristics.4/ Observed Values Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.

COMMENTS: Proteins were lower than desirable for most meaningful differentiation of baking properties. The Following selections were judged poor than the check varieties in milling quality: K77-6, K77-13, K77-108 and WA6749. Similarly, the following selections had poor baking (mixing, loaf volume, and/or crumb grain) properties: K75-40, K77-16, K77-106, K77-376, K77-613, K77-623 and K77-700. Selection K77-108 may be worthy of further testing as it is outstanding in baking quality and down only slightly in milling quality.

NURSCO 48

ROYAL SLOPE, WA

C. F KONZAK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
801018	WARED	C1015926	HRS	64.4	64.1	3.2	1100	1081	2
801019	BORAH	C1017267	HRS	66.1	65.2	2.0	1105	1049	2
801020	WAMPUM	C1017691	HRS	63.3	63.5	3.5	1065	1077	2
801021		K75-20	HRS	64.6	64.9	4.0	995	1014	2
801022		K75-40	HRS	68.9	68.6	6.1	995	976	2
801023		K77-6	HRS	66.2	66.1	2.6	1040	1034	2
801024		K77-13	HRS	67.4	66.9	3.6	1090	1059	2
801025		K77-15	HRS	65.8	65.0	3.7	1115	1065	1
801026		K77-16	HRS	63.6	63.2	1.6	1045	1020	2
801027		K77-106	HRS	61.9	61.8	1.8	1000	994	3
801028		K77-108	HRS	64.7	63.7	2.2	1065	1003	2
801029		K77-376	HRS	69.5	70.2	3.1	973	1016	4
801030		K77-603	HRS	62.8	63.4	3.5	1020	1057	2
801031		K77-613	HRS	67.4	67.9	3.5	895	926	3
801032		K77-623	HRS	64.2	64.9	3.7	925	968	3
801033		K77-700	HRS	66.7	64.1	1.9	1065	904	2
801034		K77-708	HRS	70.4	68.5	3.8	1235	1117	2
801035		WA 6510	HRS	65.8	66.5	4.0	990	1033	2
801036		WA 6748	HRS	66.1	66.0	4.2	1025	1019	3
801037		WA 6749	HRS	63.6	63.9	2.8	1055	1074	2
801038		WA 6750	HRS	64.1	64.9	4.5	1015	1065	2
801039		ID 167	HRS	63.8	63.8	4.2	1038	1038	2

NURSCO 49

ROYAL SLOPE, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
801040	WAMPUM									
801041		C1017691	HRS	63.2	73.7	0.46	85.1	10.3	64.4	4H
801042		K78-247	HRS	58.4	68.1	0.47	79.0	9.7	61.6	3M
801043		K78-358	HRS	62.0	72.6	0.43	85.9	9.4	65.3	8L
801044		K78-359	HRS	62.8	72.0	0.44	84.4	10.6	67.7	6H
801045		K78-376	HRS	63.2	71.7	0.44	84.2	9.9	64.1	6M
801046		K78-422	HRS	65.2	74.4	0.44	87.3	9.2	63.6	4M
801047		K78-454	HRS	62.0	72.7	0.46	84.1	9.8	64.2	7M
801048		K78-477	HRS	63.6	72.8	0.46	84.6	9.3	64.0	4M
801049		K78-600 6/	HRS	64.0	72.2	0.44	84.7	9.5	64.2	6M
801050		K78-613	HRS	65.2	72.6	0.42	86.1	9.3	65.2	8M
801051		K78-616	HRS	63.6	73.6	0.41	87.8	9.5	64.2	8M
801052		K78-649	HRS	62.0	71.6	0.42	85.4	8.7	62.5	7M
801053		K78-741	HRS	64.0	73.4	0.40	88.0	10.4	62.6	6M
801054		K78-1011	HRS	62.0	71.1	0.48	81.4	10.6	65.8	5H
801055		K78-1044	HRS	62.4	71.6	0.48	82.0	10.7	65.6	5H
801056		K78-1298 5/	HRS	63.6	73.7	0.39	88.9	9.8	61.7	8M
801057		K78-1349 5/	HRS	64.8	75.6	0.35	93.0	10.0	64.2	6M
801058		K78-1395 6/	HRS	62.4	72.5	0.40	87.3	9.5	63.5	4M
801059		K78-1431	HRS	61.2	71.6	0.45	83.8	10.6	62.1	6M
801060		K78-1543	HRS	62.0	72.3	0.43	85.7	9.2	61.2	4M
801061		K78-1807	HRS	62.4	72.4	0.41	86.4	11.2	65.8	5H
801062		K78-1919 6/	HRS	63.6	73.6	0.43	87.0	9.6	61.8	4M
801063		K78-2004	HRS	61.6	72.2	0.42	85.8	9.7	62.7	4M
801064		K78-2072	HRS	62.8	73.6	0.44	86.5	8.1	63.1	6L
801065		K78-2292	HRS	65.2	72.0	0.45	84.0	10.4	64.8	4H
801066		K78-2401	HRS	64.8	73.8	0.39	88.9	10.0	65.9	8M
801067		K78-2408	HRS	64.0	73.6	0.42	87.1	9.2	62.1	7M
801068		K78-2984	HRS	64.8	76.7	0.42	90.7	10.6	64.1	5H
801069		K78-2993	HRS	64.4	76.7	0.43	90.1	10.1	63.8	5H
801070		K78-2998 5/	HRS	64.4	76.7	0.42	90.5	10.0	63.4	5H
801071		K78-3006	HRS	64.0	75.9	0.39	91.1	10.7	63.5	5H
801072		K78-3019 5/	HRS	64.8	76.2	0.42	90.1	10.0	62.5	5H
801073		K78-3023 5/	HRS	65.2	76.0	0.42	89.7	9.9	63.4	6M
801074		K78-3031	HRS	64.8	75.8	0.42	89.5	10.0	63.3	6M
801075		K78-3159	HRS	63.2	73.2	0.42	86.9	10.5	64.3	3M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 49

ROYAL SLOPE, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
801040	WAMPUM	C1017691	HRS	65.1	64.8	3.4	1075	1056	2
801041		K78-247	HRS	61.2	61.5	2.2	833	852	6
801042		K78-358	HRS	67.1	67.7	6.5	835	872	6
801043		K78-359	HRS	69.7	69.1	5.7	1015	978	2
801044		K78-376	HRS	62.9	63.0	3.6	988	994	3
801045		K78-422	HRS	63.2	64.0	2.8	950	1000	3
801046		K78-454	HRS	65.4	65.6	3.7	950	962	4
801047		K78-477	HRS	64.7	65.4	2.8	915	958	3
801048		K78-600	HRS	65.1	65.6	4.4	980	1011	2
801049		K78-613	HRS	66.9	67.6	4.2	940	983	2
801050		K78-616	HRS	66.1	66.6	4.8	920	951	3
801051		K78-649	HRS	62.6	63.9	3.5	895	976	3
801052		K78-741	HRS	64.9	64.5	3.8	925	900	4
801053		K78-1011	HRS	68.8	68.2	4.4	955	918	2
801054		K78-1044	HRS	67.7	67.0	4.5	1025	982	2
801055		K78-1298	HRS	62.9	63.1	4.1	1060	1072	2
801056		K78-1349	HRS	64.6	64.6	3.8	1020	1020	2
801057		K78-1395	HRS	64.4	64.9	2.8	995	1026	2
801058		K78-1431	HRS	64.1	63.5	4.8	1020	983	2
801059		K78-1543	HRS	61.8	62.6	2.6	905	955	2
801060		K78-1807	HRS	68.4	67.2	4.3	1045	971	2
801061		K78-1919	HRS	61.8	62.2	2.2	990	1015	2
801062		K78-2004	HRS	60.8	61.1	2.9	915	934	2
801063		K78-2072	HRS	61.6	63.5	2.8	840	958	3
801064		K78-2292	HRS	67.6	67.2	3.2	985	960	2
801065		K78-2401	HRS	68.3	68.3	4.6	930	930	2
801066		K78-2408	HRS	63.7	64.5	4.1	925	975	2
801067		K78-2984	HRS	66.1	65.5	4.4	1025	988	2
801068		K78-2993	HRS	64.3	64.2	5.5	995	989	2
801069		K78-2998	HRS	64.3	64.3	5.3	1025	1025	2
801070		K78-3006	HRS	65.6	64.9	4.0	1030	987	2
801071		K78-3019	HRS	63.9	63.9	4.1	1030	1030	2
801072		K78-3023	HRS	65.2	65.3	4.5	1010	1016	2
801073		K78-3031	HRS	64.7	64.7	3.4	985	985	2
801074		K78-3159	HRS	63.2	62.7	2.0	983	952	2

COMMENTS: The selections not identified by footnotes as promising in overall quality were either poor in flour yield or low in loaf volume. Most that were not judged as promising had poor loaf volumes.

NURSCO 50

LIND, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
801075	WAMPUM									
801076		C1017691	HRS	64.8	75.8	0.39	91.0	9.7	66.6	5H
801077		K78-1485	HRS 6/	62.0	73.3	0.41	87.4	9.5	61.9	4M
801078		K78-1982	HRS 6/	60.4	72.5	0.44	85.3	9.1	64.2	4H
801079		K78-2723	HRS 6/	62.8	73.5	0.46	85.2	10.2	61.6	4H
		K78-2734	HRS	63.2	73.2	0.46	85.0	10.5	61.7	2H
801080		K78-2747	HRS	62.4	73.0	0.43	86.3	10.8	62.1	2H
801081		K78-2776	HRS 6/	63.2	73.2	0.43	86.5	9.5	60.8	4M

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein. 5/ Particularly Promising Overall Quality Characteristics.4/ Observed Values Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.

COMMENTS: Wampum was unusually good in milling quality shadowing the respectable performance of the experimental lines, which must be considered acceptable on their own merit. K78-2734 and K78-2747 baked good bread but are questionable in dough mixing properties.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

HARD RED SPRING #87

CONTD. PAGE 1

NURSCO 50

LIND, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR
					<u>3/</u>			<u>4/</u>	
801075	WAMPUM	C1017691	HRS	67.7	68.0	4.2	1055	1074	2
801076		K78-1485	HRS	62.8	63.3	3.0	995	1026	3
801077		K78-1982	HRS	65.2	66.1	3.3	975	1031	2
801078		K78-2723	HRS	63.2	63.0	5.0	1095	1083	2
801079		K78-2734	HRS	61.6	61.1	2.1	1025	994	2
801080		K78-2747	HRS	62.8	62.0	2.2	1035	985	2
801081		K78-2776	HRS	60.7	61.2	2.8	973	1004	3

NURSCO 51

SPILLMAN, PULLMAN, WA

R. LINE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	BABS
801082	LEMHI (TREATED)	CI011415	SWS	59.6	73.6	0.47	85.0	9.8	53.8	2M	
801083	LEMHI	CI011415	SWS	58.4	74.0	0.48	84.5	8.5	53.1	2M	
801084	MARFED (TREATED)	CI011919	SWS	61.6	72.3	0.46	83.8	9.9	57.6	3M	
801085	MARFED	CI011919	SWS	60.4	73.7	0.48	84.4	9.4	56.5	3M	
801086	TWIN (TREATED)	CI014588	SWS	59.6	75.4	0.53	83.4	7.8	52.1	2L	
801087	TWIN	CI014588	SWS	57.6	73.8	0.54	81.0	7.9	53.7	2L	
801088	SPRINGFIELD (TREATED)	CI014589	SWS	60.0	76.8	0.49	87.7	8.7	52.3	2L	
801089	SPRINGFIELD	CI014589	SWS	58.4	74.8	0.47	86.6	7.2	53.2	2L	
801090	WARED (TREATED)	CI015926	HRS	62.8	76.2	0.46	87.8	10.5	59.9	4M	63.6
801091	WARED	CI015926	HRS	63.2	75.9	0.45	88.2	10.2	59.7	4M	63.1
801092	BORAH (TREATED)	CI017267	HRS	62.0	74.2	0.34	92.0	11.1	61.2	4M	65.5
801093	BORAH	CI017267	HRS	62.4	73.4	0.37	89.5	10.0	60.2	6M	64.4
801094	FIELDER (TREATED)	CI017268	SWS	61.6	74.4	0.46	86.8	8.8	52.7	2M	
801095	FIELDER	CI017268	SWS	60.8	73.7	0.44	86.7	7.2	53.8	2M	
801096	URQUIE (TREATED)	CI017413	SWS	61.6	75.2	0.46	87.4	8.7	52.7	2M	
801097	URQUIE	CI017413	SWS	60.4	74.6	0.48	85.8	7.7	53.8	2M	
801098	FIELDWIN (TREATED)	CI017425	SWS	63.6	74.4	0.42	89.0	9.4	54.1	2M	
801099	FIELDWIN	CI017425	SWS	62.4	74.2	0.41	89.3	7.9	54.0	2M	
801100	WAMPUM (TREATED)	CI017269	HRS	62.0	75.1	0.41	89.4	9.6	59.3	4M	62.1
801101	WAMPUM	CI017269	HRS	61.6	74.1	0.41	88.3	8.9	58.7	6M	60.8
801102	DIRKWIN (TREATED)	CI017745	SWS	58.4	73.7	0.49	83.7	7.8	54.6	1M	
801103	DIRKWIN	CI017745	SWS	57.6	72.6	0.49	82.4	7.6	54.3	1M	
801104	WALLADAY (TREATED)	CI017759	SWS	61.6	72.1	0.46	83.6	8.7	56.7	4L	
801105	WALLADAY	CI017759	SWS	60.4	72.0	0.47	82.8	7.9	57.5	4L	
3/											
BABS											
12 samples Average - Treated											
Untreated											
				61.2	74.5	0.45	86.6	9.2	55.6	(3)63.7	(3)62.3
				60.3	73.9	0.46	85.6	8.4	55.7	(3)62.8	(3)62.1

COMMENTS: Twelve spring varieties were treated with Bayleton and Indar. Across the varieties treatment improved test weight, flour yield, milling score, and loaf volume. Little influence on cookie spread is noted across (avg.) the varieties, but some varietal difference to treatment look significant.

NURSCO 51

SPILLMAN, PULLMAN, WA

R. LINE

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC
				3/			4/			4/
801082	LEMHI (TREATED)	C1011415	SWS						9.39	9.48
801083	LEMHI	C1011415	SWS						9.37	9.32
801084	MARFED (TREATED)	C1011919	SWS						8.97	9.07
801085	MARFED	C1011919	SWS						8.96	9.00
801086	TWIN (TREATED)	C1014588	SWS						9.26	9.13
801087	TWIN	C1014588	SWS						9.34	9.17
801088	SPRINGFIELD (TREATED)	C1014589	SWS						9.34	9.31
801089	SPRINGFIELD	C1014589	SWS						9.48	9.41
801090	WARED (TREATED)	C1015926	HRS	62.1	3.5	1000	907	2	8.74	8.86
801091	WARED	C1015926	HRS	61.9	3.8	997	923	2	8.71	8.81
801092	BORAH (TREATED)	C1017267	HRS	63.4	2.5	1008	878	2	8.75	8.92
801093	BORAH	C1017267	HRS	63.4	3.2	926	864	2	8.62	8.70
801094	FIELDER (TREATED)	C1017268	SWS						9.06	9.04
801095	FIELDER	C1017268	SWS						9.26	9.06
801096	URQUIE (TREATED)	C1017413	SWS						9.40	9.37
801097	URQUIE	C1017413	SWS						9.19	9.04
801098	FIELDWIN (TREATED)	C1017425	SWS						9.02	9.07
801099	FIELDWIN	C1017425	SWS						9.42	9.30
801100	WAMPUM (TREATED)	C1017269	HRS	61.5	3.2	955	918	2	8.81	8.86
801101	WAMPUM	C1017269	HRS	60.9	3.8	947	953	2	9.02	9.02
801102	DIRKWIN (TREATED)	C1017745	SWS						9.02	8.89
801103	DIRKWIN	C1017745	SWS						9.21	9.06
801104	WALLADAY (TREATED)	C1017759	SWS						9.05	9.02
801105	WALLADAY	C1017759	SWS						9.12	9.00

12 samples Average - Treated

Untreated

(3)3.1 (3)988 (3)901 2 (12)9.07 9.09
(3)3.6 (3)957 (3)913 2 (12)9.14 9.07

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.

NURSCO 52

L, RS, D, PY, & WW, WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
801106 WA6753	LIND DRY	WA6753	SWS	61.2	73.9	0.49	84.0	9.5	56.5	9.08	9.14	2M
801107 WA6753	LIND IRRIG	WA6753	SWS	63.2	74.6	0.51	83.9	9.2	54.9	9.09	9.11	1M
801108 WA6753	ROYAL SLOPE	WA6753	SWS	62.4	74.6	0.56	80.4	9.8	55.3	8.86	8.95	2M
801109 WA6753	DAYTON	WA6753	SWS	63.2	74.5	0.42	89.4	10.2	55.9	9.03	9.16	2M
801110 WA6753	POMEROY	WA6753	SWS	62.4	74.4	0.49	84.7	8.4	55.7	9.19	9.13	2L
801111 WA6753	WALLA WALLA	WA6753	SWS	62.4	75.0	0.48	86.2	9.2	53.2	9.17	9.20	1M
801112 ID185	LIND DRY	ID185	SWS	62.8	70.1	0.42	83.8	9.6	57.9	9.06	9.13	2M
801113 ID185	LIND IRRIG	ID185	SWS	64.0	71.6	0.48	81.7	8.5	56.5	9.40	9.34	2M
801114 ID185	ROYAL SLOPE	ID185	SWS	64.0	72.4	0.44	85.0	8.6	55.6	9.41	9.36	2M
801115 ID185	DAYTON	ID185	SWS	65.2	72.8	0.36	90.6	9.8	55.7	9.24	9.33	2M
801116 ID185	POMEROY	ID185	SWS	64.8	71.7	0.39	87.4	8.4	55.3	9.12	9.05	2L
801117 ID185	WALLA WALLA	ID185	SWS	63.6	73.1	0.39	89.3	9.6	53.8	9.34	9.40	2M

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 9% Protein.4/ Observed Values Corrected to 9% Protein.5/

Particularly Promising Overall Quality Characteristics.

6/

Promising Overall Quality Characteristics.

COMMENTS:

Both of these selections have good overall quality. Location did not appear to have an effect, although flour yield was lowest for both selections at the Lind dry nursery. The two do differ in milling characteristics - WA6753 has higher flour yield but also higher ash while ID185 has lower flour yield and ash which are offsetting in milling score.

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OBS HILL, PULLMAN, WA

R. LINE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
801118	GAINES (TREATED)	C1013448	SWW	63.6	73.9	0.44	87.0	8.7	55.2	9.16	9.24	2M
801119	GAINES	C1013448	SWW	58.0	71.4	0.52	78.9	8.8	55.2	8.97	9.08	2M
801120	NUGAINES (TREATED)	C1013968	SWW	64.4	75.2	0.41	90.7	8.8	55.7	9.00	9.09	2M
801121	NUGAINES	C1013968	SWW	61.2	73.0	0.43	86.6	8.3	55.6	8.96	9.00	2L
801122	HYSLOP (TREATED)	C1014564	SWW	63.2	74.7	0.45	87.4	8.6	53.8	9.06	9.13	3L
801123	HYSLOP	C1014564	SWW	61.2	73.7	0.45	86.2	7.5	53.6	9.14	9.07	2L
801124	MCDERMID (TREATED)	C1014565	SWW	63.2	74.0	0.42	88.8	7.9	54.6	9.31	9.30	3L
801125	MCDERMID	C1014565	SWW	62.0	72.9	0.42	87.4	7.6	55.4	8.99	8.95	2L
801126	LUKE (TREATED)	C1014568	SWW	60.8	75.0	0.39	92.0	7.9	54.0	9.61	9.60	4L
801127	LUKE	C1014568	SWW	60.4	74.5	0.39	91.2	7.7	53.7	9.62	9.60	4L
801128	BARBEE (TREATED)	C1017417	CLUB	62.4	73.8	0.41	89.0	8.5	50.6	9.46	9.50	1L
801129	BARBEE	C1017417	CLUB	60.0	73.0	0.41	87.8	7.3	51.3	9.40	9.35	1L
801130	DAWS (TREATED)	C1017419	SWW	63.2	74.4	0.41	89.5	8.5	52.9	8.81	8.87	3L
801131	DAWS	C1017419	SWW	62.4	74.6	0.42	89.1	8.1	53.0	8.70	8.71	3L
801132	STEPHENS (TREATED)	C1017569	SWW	62.8	76.1	0.42	91.0	9.0	55.0	9.27	9.38	2M
801133	STEPHENS	C1017569	SWW	62.0	75.3	0.42	90.2	8.6	54.7	9.20	9.27	2M
801134	FARO (TREATED)	C1017590	CLUB	63.6	76.4	0.39	93.8	8.8	51.6	9.06	9.12	2M
801135	FARO	C1017590	CLUB	62.0	76.2	0.41	92.2	7.7	51.8	9.12	9.10	2M
801136	WALLADAY (TREATED)	C1017759	SWS	62.8	73.2	0.42	87.7	9.3	55.6	9.01	9.16	7M
801137	WALLADAY	C1017759	SWS	60.0	72.6	0.44	85.4	8.9	55.9	9.10	9.20	6L
801138	TYEE (TREATED)	C1017773	CLUB	62.0	76.6	0.43	91.4	7.8	51.6	9.32	9.31	2L
801139	TYEE	C1017773	CLUB	60.4	75.9	0.43	90.4	6.7	53.3	9.30	9.21	2L
801140	JACMAR (TREATED)		CLUB	61.2	76.7	0.43	91.5	8.4	53.1	9.61	9.63	2M
801141	JACMAR		CLUB	60.4	75.7	0.42	90.7	7.4	50.6	9.48	9.44	2L
AVERAGE TREATED				62.8	75.0	0.42	90.0	8.5	53.6	9.22	9.28	
UNTREATED				60.8	74.1	0.43	88.0	7.9	53.7	9.17	9.17	

1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.
3/ Absorption at 14% Moisture Corrected to 8% Protein. 6/ Promising Overall Quality Characteristics.
4/ Observed Values Corrected to 8% Protein.

COMMENTS: Across the 12 varieties in the Bayleton trials the treated samples were significantly better in test weight, flour yield, and milling score. The trend was also there in cookie baking quality, but most of the larger cookie spread among the treated pairs was accountable to the lower protein (8.5% vs. 7.9%).

USDA, SEA AR
WESTERN WHEAT
PULLMAN, WA.

PNWCIA COLLABRATIVE TESTS

PULLMAN & LIND, WA

NURSCO 54

LABNUM	VARIETY	IDNO	CLASS	FASH		FYELD	MSCOR	FPROT		FABSC	FPEAK	FSTAB
				1/	3/			1/	3/			
801142	NUGAINES	CI013968	SWW	0.49	77.3	84.7	8.8	57.8	57.6	58.8	1.2	1.0
801143	77-294		SWW	0.45	77.0	86.6	8.7	59.1	58.7	60.0	2.3	1.3
801144	ID5318		SWW	0.51	77.2	84.0	9.1	59.2	58.8	59.7	2.8	2.0
801145	WA6363		SWW	0.45	79.5	87.1	7.2	56.3	53.5	56.3	1.3	2.4
801146	PAHA	CI014485	CLUB	0.42	81.5	88.3	8.1	55.0	54.6	56.5	1.0	1.0
801147	JACMAR	CI017268	CLUB	0.44	79.9	87.4	8.9	56.4	54.3	55.4	3.0	1.1
801148	WA6472		CLUB	0.39	79.2	89.9	8.4	55.5	54.3	55.9	2.1	1.1
801149	FIELDER		SWS	0.46	77.4	86.3	9.7	58.6	55.3	55.6	2.0	1.0
801150	WA6402		SWS	0.44	77.2	87.4	10.7	58.9	57.4	56.7	3.7	2.0
801151	ID185		SWS	0.42	75.8	88.2	10.1	58.3	54.3	54.2	1.0	3.0
801152	BORAH	CI017267	HRS	0.38	76.4	91.5	13.1	63.1	65.2	62.1	4.5	3.9
801153	ID167		HRS	0.40	76.5	90.3	13.2	61.9	63.0	59.8	9.3	3.7
801154	WA6510		HRS	0.45	78.3	87.9	11.5	62.0	61.5	60.0	5.5	4.8
801155	WA6750		HRS	0.41	78.6	89.8	11.2	62.8	62.2	61.0	6.5	4.7
801156	WANSER	CI013844	HRW	0.43	76.1	88.8	10.7	64.0	60.6	59.9	5.2	4.4
801157	77-99	CI017745	HRW	0.43	77.0	88.9	11.6	63.5	61.7	60.1	4.7	5.3
801158	DIRKWIN		SWS	0.47	76.7	85.8	9.5	57.4	57.7	58.2	1.5	1.0
801159	WA6753		SWS	0.49	77.7	84.7	10.3	57.8	58.3	58.0	1.8	1.4

- 1/ Observed Values Corrected to 14% Moisture Basis. 5/ Particularly Promising Overall Quality Characteristics.
- 3/ Absorption at 14% Moisture Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.
- 4/ Observed Values Corrected to 10% Protein.

COMMENTS: These selections were increased in nurseries at Pullman and Lind, WA, in co-operation with the Pacific Northwest Crop Improvement Association. The soft white winters, soft white springs, and clubs at Pullman and the hard red springs and winters at Lind.

SUMMARY OF OVERALL EVALUATION			
MILLING	COOKIE	SPONGE CAKE	
		UNDON NOODLE	BREAD
NUGAINES (CHECK)			
77-294	GOOD	GOOD-FAIR	GOOD
ID 5318	GOOD	POOR	GOOD
WA 6363	GOOD-EXCELLENT	GOOD	GOOD-EXCELLENT

NURSCO 54

PULLMAN & LIND, WA

LABNUM	VARIETY	IDNO	CLASS	VISC	VISCC	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC
						3/			4/			4/
801142 NUGAINES		CI013968	SWW	61	79						8.55	8.41
801143 77-294			SWW	75	100						8.53	8.39
801144 ID5318			SWW	78	95						8.47	8.37
801145 WA6363			SWW	39	85						9.01	8.70
801146 PAHA		CI014485	CLUB	34	53						9.00	8.93
801147 JACMAR		WA6585	CLUB	54	68						9.39	9.32
801148 WA6472			CLUB	49	71						9.01	8.90
801149 FIELDER		CI017268	SWS	85	90						8.92	8.89
801150 WA6402			SWS	121	107						8.86	8.93
801151 ID185			SWS	109	107						8.86	8.87
801152 BORAH		CI017267	HRS	321	199	67.3	2.6	1113	921	2		
801153 ID167			HRS	259	159	64.1	4.3	1194	996	1		
801154 WA6510			HRS	151	117	65.7	3.7	1020	927	2		
801155 WA6750			HRS	195	158	68.0	4.3	1016	942	2		
801156 WANSE		CI013844	HRW	138	121	66.7	3.5	977	929	2		
801157 77-99			HRW	212	161	66.2	3.4	986	887	2	8.76	8.70
801158 DIRKWIN		CI017745	SWS	63	70						8.73	8.76
801159 WA6753			SWS	87	82							

SUMMARY OF OVERALL EVALUATION (CONTD)

	MILLING (CHECK)	COOKIE	SPONGE CAKE	UDON NOODLE	BREAD
PAHA					
JACMAR		GOOD-EXCELLENT	GOOD	FAIR	
WA 6472	GOOD	GOOD	GOOD-EXCELLENT	GOOD	
FIELDER	(CHECK)				
WA6402	GOOD	GOOD	GOOD*	GOOD*	
ID 185	GOOD	GOOD	GOOD*	GOOD*	
BORAH	(CHECK)				
ID 167	GOOD				GOOD
WA 6510	GOOD				GOOD-EXCELLENT
WA 6750	GOOD				GOOD

USDA, SEA AR
WESTERN WHEAT
PULLMAN, WA.

PNWCIA COLLABORATIVE TESTS

NURSCO 54

PULLMAN & LIND, WA

LABNUM	VARIETY	IDNO	CLASS	CAVOL	EXFAC	CCRGR	TEXTC	SCSOR	WTIN	RNCOL
801142 NUGAINES										
801143 77-294		C1013968	SMW	1154	32.0	23.5	24.0	79.5	337	14
801144 ID5318			SMW	1117	28.0	24.0	21.2	73.2	352	15
801145 WA6363			SMW	1099	27.0	23.0	16.0	66.0	336	14
801146 PAHA		C1014485	SMW	1143	31.0	23.5	24.0	78.5	335	15
			CLUB	1143	31.0	22.5	21.6	75.1	355	15
801147 JAGMAR		WA6585	CLUB	1125	29.0	23.5	23.6	76.1	329	14
801148 WA6472			CLUB	1132	30.0	23.0	25.8	78.8	338	15
801149 FIELDER		C1017268	SWS	1077	25.0	22.5	19.1	66.6	338	8
801150 WA6402			SWS	1061	23.0	21.0	21.6	65.6	323	12
801151 ID185			SWS	1096	27.0	22.0	18.5	67.5	337	12
801152 BORAH		C1017267	HRS							
801153 ID167			HRS							
801154 WA6510			HRS							
801155 WA6750			HRS							
801156 WANSER		C1013844	HRW							
801157 77-99			HRW							
801158 DIRKWIN		C1017745	SWS	1052	22.0	21.0	24.8	67.8	328	12
801159 WA6753			SWS	1073	24.0	20.5	23.4	67.9	325	12

SUMMARY OF OVERALL EVALUATION (CONTD)

DIRKWIN	MILLING (CHECK)	COOKIE	SPONGE CAKE	UDON NOODLE	BREAD
WA 6753	GOOD	GOOD	GOOD*	GOOD*	

* "GOOD" indicates only that they were equal to the check variety. None of the SWS wheats were acceptable in sponge cake and noodle quality when compared to either the SWS or clubs. Breeders should seriously consider the consequences of releasing varieties that when marketed either alone or blended with the winter wheat crop will jeopardize the long standing Oriental markets. Considerable screening of SWS wheats for sponge cake and noodle making appears necessary. Not one of the current varieties are acceptable for these products. Part of the poor performance of SWS wheats in these products is the usual 1-2% higher protein generally produced in spring wheats, so management for protein content may also be an aid to providing better end use quality.

Results from the foreign and domestic mill laboratories and bakeries will be distributed in the PNWCIA Collaborative Tests report in the near future.

LABNUM	VARIETY	IDNO	CLASS	CNCOL	TEXTN	NYELD	NOSCO	MTYPE	RMKS
801142 NUGAINES									
801143 77-294		CI013968	SWW	14	32	15	75	3M	
801144 ID5318			SWW	15	30	16	76	2M	
801145 WA6363			SWW	15	30	15	74	4M	
801146 PAHA		CI014485	SWW	15	34	15	79	3L	
			CLUB	16	26	17	74	1M	
801147 JACMAR		WA6585	CLUB	15	26	14	69	2M	
801148 WA6472			CLUB	15	28	15	73	1M	
801149 FIELDER		CI017268	SWS	12	24	15	59	2M	
801150 WA6402			SWS	13	30	13	68	3M	
801151 ID185			SWS	15	24	15	66	2M	
801152 BORAH		CI017267	HRS					2H	
801153 ID167			HRS					3H	
801154 WA6510			HRS					3H	
801155 WA6750			HRS					3H	
801156 WANSER		CI013844	HRW					3H	
801157 77-99			HRW					2H	
801158 DIRKWIN		CI017745	SWS	14	26	14	66	2H	
801159 WA6753			SWS	14	30	14	70	2H	

Michigan Sprouted Wheat Study

USDA, SEA-AR
Western Wheat Quality Lab.
Pullman, Washington

Sample Preparation The samples were received from the USDA, Soft Wheat Quality Laboratory, Wooster, OH as 50% patent, 10% cut-off, clears, red dog, head shorts, tail shorts, and bran with the weights of each obtained during milling on a Miag Multomat. Three flours were constructed from these mill stream parts. The 50% patent, 10% cut-off and clears were blended to make a straight grade flour, the red dog and shorts were ground (and reground if needed) and sifted over a 94ss to prepare a 77% extraction and similarly the bran was lightly ground and the flour sifted away to prepare an 82% extraction flour.

Analysis The fifteen flours were analyzed for moisture, protein, ash and water absorption. Values reported in Table 1 are on 14% moisture basis and the methods used are accepted AACC Methods. The straight grade flours were tested for their performance in cookie baking, White Arabic (flat-pocket type) bread, and Tunisian (Terablesi) which is a yeast raised bread. The 77% extraction flours were evaluated for use in an Iranian (Barbari) bread that is semi-raised. The 82% extraction flour was evaluated for use in a popular Middle-Eastern bread called Lavash (flat cracker type). The formula and procedures followed are given in Table 2.

Results and Conclusions *Cookie* - No significant differences in cookie diameter or top grain could be noted. All the wheats from sound to 80% sprouted appeared acceptable in cookie baking. No taste evaluations were made.

Flat Breads - The flat breads were evaluated for crust color, crumb color, texture, flavor, and an overall performance. The results are in Table 3. Lavash, Arabic White, and Barbari breads could possibly tolerate up to the 10% sprout level. The most serious fault was an off-flavor that could be detected at even this lower level of sprouting. The flavor was a hint of mustiness and/or malty taste and was very evident at levels of sprouting above 10%. The Tunisian (raised bread) Terablese was very poor at all levels of sprouting. The loaf appearance was dull in color and crumb was wet, gummy and very sticky. Additions of 50 ppm ascorbic acid improved the loaf volumes slightly, but did not improve the undesirable color or texture character of the breads.

TABLE 1
MICHIGAN SPROUT STUDY

WHLAL	IDNO	WHLAL	PROTEIN (AS IS)	LYSINE Mg/g. Prot.	HARDNESS INDEX	WHLAT*	FLOUR ASH	FLOUR PROTEIN	FLOUR MOISTURE (%)	FALLING NUMBER FL/WHI	BAKE ABSC	COOKIE	COOKIE 1/ CORRECTED
801160	CONTROL	ST. GRADE	10.4	2.83	36		0.39	8.9	13.9	412/438	55.0	9.34	9.33
801161	10% SPROUTED	ST. GRADE	9.6	3.06	10		0.37	8.1	13.4	238/215	54.6	9.51	9.41
801162	32% SPROUTED	ST. GRADE	9.3	3.04	14		0.31	8.2	13.4	64/60	53.1	9.54	9.45
801163	39% SPROUTED	ST. GRADE	9.2	3.04	17		0.32	7.8	13.6	61/60	53.2	9.31	9.17
801164	80% SPROUTED	ST. GRADE	8.9	3.15	24		0.31	7.5	13.8	60/60	52.8	9.39	9.22
801165	CONTROL	77% EXT.					0.49	9.1	13.6		56.4		
801166	10% SPROUTED	77% EXT.					0.49	8.5	13.1		55.5		
801167	32% SPROUTED	77% EXT.					0.52	8.7	13.2		54.3		
801168	39% SPROUTED	77% EXT.					0.50	8.2	13.4		55.6		
801169	80% SPROUTED	77% EXT.					0.54	8.2	13.6		54.3		
801170	CONTROL	82% EXT.					0.74	9.6	13.5		58.8		
801171	10% SPROUTED	82% EXT.					0.64	8.9	13.1		56.6		
801172	32% SPROUTED	82% EXT.					0.75	9.1	12.9		55.6		
801173	39% SPROUTED	82% EXT.					0.79	9.0	13.2		55.1		
801174	80% SPROUTED	82% EXT.					0.84	8.9	13.1		55.6		

1/ Corrected to 9.0% Protein.

* Kernel texture measured by NIR Reflectance.

The smaller the number the softer the flour texture.

TABLE 2
BREADS FORMULAE AND PROCEDURES

FLOUR	<u>LAVASH</u> 100(82% ext.)	<u>ARABIC WHITE</u> 100(St. Grd.)	<u>BARBARI</u> 100(77% ext.)	<u>TUNISIAN</u> 100(St. Grd)
WATER*	VARIABLE	VARIABLE	VARIABLE	VARIABLE
YEAST**	0.5	1	1	1
SALT**	1.5	1.5	2	1.5
FERMENTATION(MIN)	90	30	120	30
1st PROOF	-	-	20	-
SHEET THICKNESS (mm)	1	3	6	25
FINAL PROOF	-	45	15	45
BAKING TIME (MIN)	1.30	1	13	35
BAKING TEMP. (F)	630	850	500	420

* Water absorption was determined for each individual flour. Water absorption levels of Arabic white, Barbari and Tunisian were adjusted to 800, 400 and 450 lines of Farinograph, respectively. Water absorption level for lavash was determined by dough feel because of excessive dryness (43-45% water absorption).

** Based on 100 part flour.

TABLE 3
Results of Sprouted Wheat Flour testing

	<u>LAVASH</u>	<u>ARABIC WHITE</u>	<u>BARBARI</u>	<u>TUNISIAN *</u>
CONTROL				
CRUST COLOR	S	S	S	Q-S
CRUMB COLOR	S	S	E	S
TEXTURE	S	S	E	S
FLAVOR	S	S	S	S
OVERALL PERFORMANCE	S	S	S	Q-S
10% Sprout				
CRUST COLOR	S	S	E	U
CRUMB COLOR	Q-S	Q-S	S	U
TEXTURE	S	S	S	U
FLAVOR	Q-U	Q-S	Q-U	Q-U
OVERALL PERFORM.	Q-S	Q-S	Q-S	Q-U
32% Sprout				
CRUST COLOR	S	S	S	U
CRUMB COLOR	Q-S	Q-S	S	U
TEXTURE	S	S	S	U
FLAVOR	U	U	U	U
OVERALL PERFORMANCE	U	U	U	U
39% Sprout				
CRUST COLOR	S	S	S	U
CRUMB COLOR	Q-S	Q-S	S	U
TEXTURE	S	Q-S	S	U
FLAVOR	U	U	U	U
OVERALL PERFORMANCE	U	U	U	U
80% Sprout				
CRUST COLOR	S	S	U	U
CRUMB COLOR	Q-S	Q-S	U	U
TEXTURE	S	U	U	U
FLAVOR	U	U	U	U
OVERALL PERFORMANCE	U	U	U	U

E = Excellent S = Satisfactory Q-S = Questionable-Satisfactory U = Unsatisfactory

* Addition of 50 ppm ascorbic acid did not improve characteristics of Tunisian Breads.

NURSCO 56

UCD, KINGS&SUTTER CO.

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
801175	SHASTA UC DAVIS	C103976	HRW	64.8	74.7	0.42	88.3	10.9	61.7	3H
801176	INIA 66R	C1014195	HRW	64.0	73.1	0.38	88.7	12.5	63.8	5H
801177	ANZA	C1015284	HRW	65.2	75.4	0.38	91.0	9.3	60.7	2M
801178	TANORI 71		HRW	65.2	74.0	0.35	91.2	12.0	61.7	4H
801179	YECORA ROJO		HRW	65.2	74.8	0.37	91.0	11.1	62.4	5H
801180	GERMAIN'S W444		HRW 6/	64.8	74.3	0.37	90.4	11.7	64.1	5H
801181	PAVON F76		HRW 6/	64.4	73.3	0.40	88.0	10.1	63.1	4H
801182	NAPB 183-74 "OSLO"		HRW 6/	64.4	75.8	0.37	92.2	11.9	63.8	4H
801183	NK PROBRAND 611		HRW 6/	62.8	74.5	0.35	91.9	10.7	61.6	5H
801184	NK 77S 1817		HRW 6/	64.0	74.2	0.37	90.7	11.0	62.9	6H
801185	D7316		HRW	62.8	72.3	0.42	86.0	9.7	62.5	4H
801186	D7901		HRW	63.2	70.3	0.40	85.0	10.3	62.6	4H
801187	CA70276-27D-1S-1D-1TL-1D		HRW	65.2	76.3	0.39	91.7	8.9	62.3	3M
801188	CA70293-17D-1S-3D-OTL		HRW 6/	65.2	75.1	0.38	90.8	10.7	62.5	4H
801189	CA70293-19D-1S-OD-4SL-2D-1TL		HRW	66.4	74.5	0.39	89.9	11.5	62.3	2H
801190	CA70296-231D-1D-3D-4D-1D		HRW	66.0	72.3	0.39	87.7	10.4	61.8	2M
801191	CA70297-74D-6D-2TL-1D-OD		HRW	64.8	73.1	0.35	90.4	10.5	62.7	2H
801192	SHASTA KINGS COUNTY		HRW	64.4	73.4	0.47	84.7	10.7	60.1	2H
801193	INIA 66R	C103976	HRW	64.8	73.0	0.36	89.6	11.4	62.4	4H
801194	ANZA	C1015284	HRW	64.0	73.6	0.41	87.9	9.2	60.0	2M
801195	TANORI 71		HRW	64.4	73.0	0.36	89.7	11.4	61.9	4H
801196	YECORA ROJO		HRW	64.0	72.1	0.39	87.5	11.9	61.8	5H
801197	GERMAIN'S W444		HRW 6/	64.4	72.8	0.39	88.3	10.7	64.8	5H
801198	PAVON F76		HRW 6/	63.6	71.5	0.44	84.1	10.0	62.9	4H
801199	NAPB 183-74 "OSLO"		HRW 6/	64.0	74.6	0.37	90.8	11.0	64.1	4H
801200	NK PROBRAND 611		HRW 6/	61.2	72.8	0.36	89.6	11.1	61.0	5H
801201	NK 77S 1817		HRW 6/	65.2	74.7	0.38	90.5	11.5	61.0	5H
801202	D7316		HRW	61.6	70.7	0.39	86.1	9.1	63.0	4H
801203	D7901		HRW	63.2	68.7	0.39	83.8	10.0	63.9	4H
801204	CA70276-27D-1S-1D-1TL-1D		HRW	63.6	73.8	0.39	89.1	9.2	62.3	3M
801205	CA70293-17D-1S-3D-OTL		HRW 6/	64.8	73.9	0.39	89.2	10.1	60.9	4M
801206	CA70293-19D-1S-OD-4SL-2D-1TL		HRW	65.2	72.5	0.43	85.8	10.9	60.5	3H
801207	CA70296-231D-1D-3D-4D-1D		HRW	63.6	72.1	0.42	85.8	9.9	60.3	2M
801208	CA70297-74D-6D-2TL-1D-OD		HRW	62.0	71.7	0.40	86.4	10.5	60.8	2H
801209	SHASTA SUTTER COUNTY	C103976	HRW	67.2	75.2	0.44	88.0	10.4	60.3	2H

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NURSCO 56

UCD, KINGS&SUTTER CO.

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
801175	SHASTA UC DAVIS	C103976	HRW	66.8	65.9	2.7	1003	947	2	
801176	INIA 66R	C1014195	HRW	70.5	68.0	3.9	1217	1062	2	
801177	ANZA	C1015284	HRW	64.2	64.9	2.0	870	913	8	
801178	TANORI 71		HRW	67.9	65.9	3.4	1145	1021	2	
801179	YECORA ROJO		HRW	67.7	66.6	5.4	1128	1060	2	
801180	GERMAIN'S W444		HRW	69.0	67.3	5.6	1040	935	2	Sl. low LVOL
801181	PAVON F76		HRW	67.9	67.8	3.3	956	950	2	
801182	NAPB 183-74 "OSLO"		HRW	68.9	67.0	4.3	1049	931	2	Sl. low LVOL
801183	NK PROBRAND 611		HRW	66.5	65.8	4.8	1022	979	2	
801184	NK 77S 1817		HRW	68.1	67.1	6.8	1068	1006	2	
801185	D7316		HRW	66.4	66.7	3.5	875	894	3	low FYELD, LVOL
801186	D7901		HRW	68.6	68.3	3.8	833	814	6	low FYELD, LVOL
801187	CA70276-27D-1S-1D-1TL-1D		HRW	63.4	64.5	1.5	898	966	4	poor MTIME, BCRGR
801188	CA70293-17D-1S-3D-OTL		HRW	67.4	66.7	3.4	992	949	2	
801189	CA70293-19D-1S-OD-4SL-2D-1TL		HRW	68.0	66.5	2.5	990	897	2	low LVOL
801190	CA70296-231D-1D-3D-4D-1D		HRW	65.7	65.3	1.4	872	847	6	poor MTIME, BCRGR
801191	CA70297-74D-6D-2TL-1D-OD		HRW	67.4	66.9	2.2	1000	969	4	poor MTIME, BCRGR
801192	SHASTA KINGS COUNTY	C103976	HRW	65.0	64.3	2.3	877	834	4	
801193	INIA 66R	C1014195	HRW	68.0	66.6	3.9	1043	956	2	
801194	ANZA	C1015284	HRW	62.4	63.2	1.6	780	829	8	
801195	TANORI 71		HRW	67.5	66.1	3.2	1022	935	2	
801196	YECORA ROJO		HRW	67.9	66.0	4.3	1055	937	2	
801197	GERMAIN'S W444		HRW	69.7	69.0	5.4	1002	959	2	
801198	PAVON F76		HRW	67.1	67.1	2.9	1000	1000	2	
801199	NAPB 183-74 "OSLO"		HRW	67.3	66.3	3.8	1032	970	3	
801200	NK PROBRAND 611		HRW	66.3	65.2	3.9	1025	957	2	
801201	NK 77S 1817		HRW	66.7	65.2	5.4	1100	1007	2	
801202	D7316		HRW	66.3	67.2	2.8	930	986	4	poor FYELD, BCRGR
801203	D7901		HRW	68.1	68.1	3.2	825	825	8	poor FYELD, BCRGR
801204	CA70276-27D-1S-1D-1TL-1D		HRW	63.7	64.5	1.6	942	992	2	v. short MTIME
801205	CA70293-17D-1S-3D-OTL		HRW	64.2	64.1	3.1	896	890	2	
801206	CA70293-19D-1S-OD-4SL-2D-1TL		HRW	65.1	64.2	2.2	909	853	5	poor BCRGR
801207	CA70296-231D-1D-3D-4D-1D		HRW	62.4	62.5	1.4	810	816	8	poor LVOL, BCRGR
801208	CA70297-74D-6D-2TL-1D-OD		HRW	65.0	64.5	1.8	930	899	6	poor LVOL, BCRGR
801209	SHASTA SUTTER COUNTY	C103976	HRW	64.9	64.5	2.5	893	868	6	

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NURSCO 56

UCD, KINGS&SUTTER CO.

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH I/	MSCOR	FPROT I/	MABSC 3/	MTYPE
801210	INIA 66R	C1014195	HRW	65.2	72.0	0.35	89.3	11.9	63.5	4H
801211	ANZA	C1015284	HRW	66.8	74.2	0.40	89.2	9.4	59.9	3M
801212	GERMAIN'S W444		HRW	65.6	74.2	0.41	88.5	10.2	63.2	6M
801213	PAVON F76		HRW	67.2	73.7	0.42	87.5	9.2	63.6	4M
801214	NAPB 183-74 "OSLO"		HRW	65.6	76.0	0.38	92.1	10.5	63.9	4H
801215	NK PROBRAND 611		HRW	65.2	73.9	0.38	89.9	9.8	60.5	8M
801216	D7316		HRW	66.0	73.4	0.39	88.6	9.2	65.1	8M
801217	D7901		HRW	66.0	71.2	0.40	85.9	9.0	64.4	7M
801218	CA70276-27D-1S-1D-1TL-1D		HRW	66.0	75.8	0.40	90.9	8.7	61.4	3M
801219	CA70293-17D-1S-3D-0TL		HRW	66.8	73.9	0.40	88.7	10.0	61.9	6M
801220	CA70293-19D-1S-0D-4SL-2D-1TL		HRW	67.2	73.5	0.39	88.9	11.6	61.7	3H
801221	CA70296-231D-1D-3D-4D-1D		HRW	65.2	72.3	0.41	86.0	9.5	59.0	2M
801222	CA70297-74D-6D-2TL-1D-0D		HRW	66.4	72.6	0.37	88.7	10.3	61.5	3M

NURSCO 56

UCD, KINGS&SUTTER CO.

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
801210	INIA 66R	C1014195 C1015284	HRW	69.6	67.7	3.8	1022	904	2	
801211	ANZA		HRW	63.5	64.1	2.4	775	812	8	
801212	GERMAIN'S W444		HRW	67.6	67.4	3.9	1000	988	1	
801213	PAVON F76		HRW	67.0	67.8	4.2	893	943	2	
801214	NAPB 183-74 "OSLO"		HRW	68.6	68.1	3.6	1000	969	2	
801215	NK PROBRAND 611		HRW	64.5	64.7	4.4	982	994	2	poor BCRGR
801216	D7316		HRW	68.5	69.3	3.3	882	932	4	poor LVOL, BCRGR
801217	D7901		HRW	67.6	68.6	3.3	755	817	6	poor LVOL, BCRGR
801218	CA70276-27D-1S-1D-1TL-1D		HRW	62.3	63.6	1.7	845	926	6	poor MTIME, BCRGR
801219	CA70293-17D-1S-3D-0TL		HRW	66.1	66.1	3.5	950	950	2	
801220	CA70293-19D-1S-0D-4SL-2D-1TL		HRW	67.5	65.9	2.3	975	876	4	poor LVOL, BCRGR
801221	CA70296-231D-1D-3D-4D-1D		HRW	60.7	61.2	1.1	807	838	9	poor MTIME, BCRGR
801222	CA70297-74D-6D-2TL-1D-0D		HRW	66.0	65.7	1.8	965	946	2	Questionable MTIME

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein.4/ Observed Values Corrected to 10% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS:

Note the three locations of U.C. Davis, Kings County, and Sutter County, each nursery beginning with Lab. number 801175, 801192, and 801209, respectively. Footnotes following the class denote those that have promising overall quality. See remarks column for deficiencies of the other selections.

NURSCO 57

PULLMAN, WA

R.E. ALLAN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
						<u>1/</u>		<u>1/</u>	<u>3/</u>		
801223 BURT		C1012696	HWW	62.8	73.2	0.48	83.5	8.1	56.4	6M	59.7
801224 BURT		012696	HWW	62.8	74.4	0.42	88.1	8.4	56.1	6M	59.7
801225 C113253/7*BURT/IBIS//2*BURT		REPS 1 & 1	SWW	60.4	74.9	0.44	88.5	6.2	53.2	2L	53.6
801226 SUWON92/6*BURT/FALCO//2*BURT		REPS 1 & 1	HRW	61.2	72.0	0.47	83.2	6.9	53.9	6L	56.0
801227 SUWON92/6*BURT/IBIS//2*BURT		REPS 1 & 1	HRW	61.2	74.7	0.46	86.2	7.4	53.3	2L	55.9
801228 C113253/7*BURT/CLEO//2*BURT		REPS 1 & 1	SWW	60.8	75.8	0.44	89.7	6.7	51.7	2L	51.6

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 7% Protein. 5/ Particularly Promising Overall Quality Characteristics.4/ Observed Values Corrected to 7% Protein. 6/ Promising Overall Quality Characteristics.

COMMENTS: The first Burt gave a high flour ash which lowered the milling score and it also had a heavy crumb grain. The selections from the Burt crosses all milled good, particularly the two that were soft endosperm. These two soft selections were outstanding in cookie baking. The protein was too low to give meaningful bread evaluation. Mixing times of the two soft selections are too short for bread flours.

NURSCO 57

PULLMAN, WA

R.E. ALLAN

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC
				<u>3/</u>			<u>4/</u>			<u>4/</u>
801223 BURT		C1012696	HWW	58.6	3.4	792	736	6		
801224 BURT		012696	HWW	58.3	3.6	837	766	2		
801225 C113253/7*BURT/IBIS//2*BURT		REPS 1 & 1	SWW	54.4	2.2	635	683	9	9.65	9.56
801226 SUWON92/6*BURT/FALCO//2*BURT		REPS 1 & 1	HRW	56.1	3.5	652	658	9		
801227 SUWON92/6*BURT/IBIS//2*BURT		REPS 1 & 1	HRW	55.5	2.7	730	705	6		
801228 C113253/7*BURT/CLEO//2*BURT		REPS 1 & 1	SWW	51.9	2.1	670	688	8	9.37	9.34

NURSCO 58

PULLMAN, WA

R.E. ALLAN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	BABS
801229 79PS23			SWW	60.0	73.9	0.43	87.6	9.8	53.1	3M	
801230 79PS24	5/		SWW	60.8	74.7	0.40	90.6	8.8	52.6	3M	
801231 79PS25			HWW	61.2	76.1	0.49	86.6	8.9	54.5	3M	
801232 79PS26			HWW	64.0	73.4	0.42	87.2	9.3	58.0	3M	61.5
801233 79PS27	5/		SWW	62.8	75.3	0.43	89.8	8.0	53.6	3L	
801234 79PS28	5/		HRW	61.2	74.7	0.39	89.9	8.9	57.2	6M	59.3
801235 79PS29	5/		HRW	59.6	76.9	0.39	92.4	10.1	56.7	6M	60.5
801236 79PS30	5/		HWW	61.2	74.6	0.38	90.2	9.5	57.1	6M	59.8
801237 79PS31	6/		SWW	60.8	77.5	0.41	93.4	9.9	54.7	3M	
801238 79PS32	COULEE		HWW	62.4	75.8	0.40	90.7	10.0	59.6	5H	62.8
801239 79PS33	NUGAINES	C1013968	SWW	61.2	74.6	0.41	90.3	9.3	54.4	2M	
801240 79PS34	LUKE	C1014586	SWW	61.2	75.5	0.41	90.8	9.8	55.1	3M	
801241 79PS35	DAWS	C1017419	SWW	60.8	73.9	0.46	86.1	9.5	52.9	3M	

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.

COMMENTS: Selection 79PS25 has excellent flour yield and appears hard yielding a low cookie diameter. Others of the selections are outstanding in milling and baking quality for their class (See footnotes).

NURSCO 58

PULLMAN, WA

R.E. ALLAN

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	REMARKS
801229 79PS23			SWW						8.56	8.65 low CODI	
801230 79PS24			SWW						9.15	9.13	
801231 79PS25			HWW						8.60	8.59	short MT, LOW
801232 79PS26			HWW	61.2	2.0	857	838	2			
801233 79PS27			SWW						9.39	9.28	LVOL
801234 79PS28			HRW	59.4	4.2	911	917	2			
801235 79PS29			HRW	59.4	3.7	981	913	2			
801236 79PS30			HWW	59.3	4.2	910	879	2			
801237 79PS31			SWW						9.49	9.59	
801238 79PS32 COULEE			HWW	61.8	4.8	962	900	2			
801239 79PS33 NUGAINES		C1013968	SWW						9.04	9.07	
801240 79PS34 LUKE		C1014586	SWW						9.56	9.65	
801241 79PS35 DAW'S		C1017419	SWW						8.75	8.80	

LABNUM	VARIETY	IDNO	CLASS	WPROT	FYIELD	FASH 1/	MSCOR	FMIST	FPROT 1/	AGTRO
801242	MORO PULLMAN WINTER									
801243	PAHA	C1013740	CLUB	8.3	73.8	0.47	84.6	12.8	7.2	81.2
801244	MCDERMID	C1014485	CLUB	10.6	73.4	0.46	84.2	12.9	9.1	74.4
801245	LUKE	C1014565	SWW	8.8	71.4	0.44	80.0	12.9	8.1	80.3
801246	BARBEE	C1014586	SWW	10.7	73.0	0.46	81.6	12.9	9.6	71.0
		C1017417	CLUB	10.9	69.7	0.47	77.3	13.0	9.3	69.0
801247	DAWS									
801248	STEPHENS	C1017419	SWW	9.3	71.5	0.48	79.3	12.9	7.8	81.8
801249	FARO	C1017569	SWW	9.6	72.6	0.44	81.2	12.7	8.4	84.0
801250	GREER	C1017590	CLUB	8.3	72.3	0.43	82.6	13.4	7.0	86.8
801251	HATTON	C1017725	SWW	8.6	72.2	0.47	80.4	12.5	7.2	78.0
		C1017772	HRW	10.7	74.0	0.50	82.2	13.5	8.9	75.8
801252	TYEE									
801253	JACMAR	C1017773	CLUB	8.4	72.8	0.45	83.5	13.1	7.3	82.5
801254	CREW	WA6472	CLUB 5/	10.7	71.8	0.48	79.7	13.0	9.5	76.8
801255	OR7142		CLUB 6/	9.5	72.9	0.49	81.3	12.6	9.7	74.0
801256	OR68007		SWW 6/	10.7	73.2	0.48	83.8	13.1	8.5	85.0
							81.0	13.2	9.1	77.5
801257	77-99		HRW 6/	13.0	68.5	0.45	77.8	13.3	11.0	66.5
801258	77-294		SWW 6/	10.3	69.3	0.46	76.2	13.0	8.8	78.0
801259	BAAFT PULLMAN SPRING	C1001697	SWS	11.3	70.7	0.49	76.7	13.0	9.7	81.5
801260	TWIN	C1014588	SWS	11.3	71.4	0.54	75.2	12.8	10.0	79.5
801261	PEAK 72	C1015319	HRS	12.9	69.3	0.39	81.0	13.3	11.3	75.0
801262	WARED									
801263	BORAH	C1015926	HRS	13.4	71.7	0.43	82.8	13.6	11.4	81.0
801264	URQUIE	C1017267	HRS	12.4	71.5	0.41	83.7	13.6	11.2	78.5
801265	SAWTELL	C1017413	SWS	10.1	72.1	0.53	75.2	13.0	9.2	77.3
801266	WAMPUM	C1017424	HRS	11.2	72.4	0.46	83.2	13.2	9.8	72.8
		C1017691	HRS	11.5	71.4	0.48	80.4	13.5	10.7	76.5
801267	WALLADAY									
801268	WAVERLY (WA6402)	C1017759	SWS 6/	10.6	69.5	0.48	75.2	12.8	9.1	79.0
801269	OWEN (ID 185)	C1017911	SWS 6/	11.6	71.6	0.44	80.4	12.8	10.2	84.0
801270	ID 195	C1017904	SWS 6/	11.3	69.5	0.42	77.7	12.9	9.8	79.3
801271	CHEYENNE LIND WINTER		SWS 6/	10.6	71.5	0.43	80.5	13.0	8.7	81.8
		C1008885	HRW	13.2	72.0	0.45	82.4	13.6	11.5	72.0
801272	MORO									
801273	MCCALL	C1013740	CLUB	9.9	74.4	0.41	88.4	13.2	9.1	78.8
801274	WANSER	C1013842	HRW	10.7	71.5	0.42	83.8	14.2	10.1	78.5
801275	NUGAINES	C1013844	HRW	11.8	70.8	0.41	82.0	14.1	11.0	73.0
801276	LUKE	C1013968	SWW	10.0	70.3	0.37	82.6	12.9	8.8	81.0
		C1014586	SWW	10.3	73.1	0.37	86.8	12.9	9.1	78.8

DRILL STRIPS

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PULLMAN & LIND, WA

LABNUM	VARIETY	IDNO	CLASS	MABSC 3/	MTYPE	FABS	FPEAK	FSTAB	VISC	VISCC
801242	MORO PULLMAN WINTER	CI013740	CLUB	53.4	2L				34	73
801243	PAHA	CI014485	CLUB	50.6	1M				36	43
801244	MCDERMID	CI014565	SWW	53.1	3L				38	60
801245	LUKE	CI014586	SWW	53.6	3M				67	73
801246	BARBEE	CI017417	CLUB	50.5	1M				39	45
801247	DAWS	CI017419	SWW	52.9	5L				59	103
801248	STEPHENS	CI017569	SWW	53.1	3L				41	58
801249	FARO	CI017590	CLUB	53.3	2L				33	78
801250	GREER	CI017725	SWW	54.6	4L				52	115
801251	HATTON	CI017772	HRW	60.0	4M	59.7	4.2	3.8		
801252	TYEE	CI017773	CLUB	52.2	2L				36	75
801253	JACMAR	WA6472	CLUB	52.3	3M				66	73
801254	CREW		CLUB	51.7	1M				46	49
801255	OR7142		CLUB	52.0	2L				64	91
801256	OR68007		SWW	52.1	2M				60	66
801257	77-99		HRW	59.7	4H	61.0	4.5	5.0	76	99
801258	77-294		SWW	53.0	2M				82	87
801259	BAART PULLMAN SPRING	CI001697	SWS	52.6	2M				88	88
801260	TWIN	CI014588	SWS	54.6	3M					
801261	PEAK 72	CI015319	HRS	62.9	8H	60.2	35.0	21.0		
801262	WARED	CI015926	HRS	62.1	5H	60.9	12.7	9.5		
801263	BORAH	CI017267	HRS	60.3	4H	61.0	6.1	3.8		
801264	URQUIE	CI017413	SWS	55.1	3M					
801265	SAWTELL	CI017424	HRS	59.3	6M	57.1	6.7	8.7	85	100
801266	WAMPUM	CI017691	HRS	60.7	6M	58.2	6.3	7.0		
801267	WALLADAY	CI017759	SWS	56.5	7M				83	100
801268	WAVERLY (WA6402)	CI017911	SWS	56.4	2H				124	119
801269	OWEN (ID 185)	CI017904	SWS	55.4	3M				116	121
801270	ID 195		SWS	54.1	3M				88	118
801271	CHEYENNE LIND WINTER	CI008885	HRW	62.5	6H	61.7	9.0	8.3		
801272	MORO	CI013740	CLUB	53.5	2M				79	96
801273	MCCALL	CI013842	HRW	62.1	5H	64.2	9.0	11.4		
801274	WANSER	CI013844	HRW	62.1	4H	64.4	8.5	6.0		
801275	NUGAINES	CI013968	SWW	55.9	3M				102	133
801276	LUKE	CI014586	SWW	54.6	4M				79	96

DRILL STRIPS

NURSCO 59

PULLMAN & LIND, WA

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI
801242	MORO PULLMAN WINTER									
801243	PAHA	C1013740	CLUB	51.8	54.6	1.9	750	904	8	9.47
801244	MCDERMID	C1014485	CLUB	49.9	50.8	1.1	545	595	9	9.40
801245	LUKE	C1014565	SWW	53.4	55.3	3.1	710	824	8	9.32
801246	BARBEE	C1014586	SWW	55.4	55.8	2.3	825	849	5	9.04
		C1017417	CLUB	51.0	51.7	1.0	700	739	9	9.06
801247	DAWS	C1017419	SWW	54.9	57.1	3.1	730	862	8	8.64
801248	STEPHENS	C1017569	SWW	52.7	54.3	2.0	755	851	7	9.14
801249	FARO	C1017590	CLUB	52.5	55.5	2.7	600	765	9	9.25
801250	GREER	C1017725	SWW	55.0	57.8	3.5	700	868	6	8.84
801251	HATTON	C1017772	HRW	60.6	61.7	2.8	908	976	2	8.35
801252	TYEE	C1017773	CLUB	51.7	54.4	2.4	645	794	9	9.21
801253	JACMAR		CLUB	52.0	52.5	1.5	855	883	7	9.39
801254	CREW	WA6472	CLUB	51.6	51.9	1.0	715	732	9	9.05
801255	OR7142		CLUB	51.7	53.2	1.8	720	803	8	8.75
801256	OR68007		SWW	52.8	53.3	2.5	785	815	6	8.62
801257	77-99		HRW	62.4	61.4	2.8	948	886	2	8.09
801258	77-294		SWW	56.0	57.2	2.3	730	802	8	8.76
801259	BAART PULLMAN SPRING		SWS	51.5	51.8	1.1	800	818	6	8.92
801260	TWIN	C1001697	SWS	55.8	55.8	2.3	890	890	4	8.80
801261	PEAK 72	C1014588		65.9	64.6	12.1	925	844	2	7.94
		C1015319	HRW							
801262	WARED	C1015926	HRW	66.2	64.8	4.7	1100	1013	2	8.01
801263	BORAH	C1017267	HRW	64.7	63.5	2.9	1045	971	2	8.40
801264	URQUIE	C1017413	SWS	55.5	56.3	2.2	885	933	5	8.71
801265	SAWTELL	C1017424	HRW	61.8	62.0	5.1	925	937	2	8.22
801266	WAMPUM	C1017691	HRW	63.6	62.9	4.2	1010	967	2	8.32
801267	WALLADAY	C1017759	SWS	57.8	58.7	4.0	900	954	5	9.00
801268	WAVERLY (WA6402)	C1017911	SWS	57.8	57.6	2.0	905	893	4	8.65
801269	OWEN (ID 185)	C1017904	SWS	55.4	55.6	2.3	960	972	2	8.91
801270	ID 195		SWS	54.0	55.3	2.4	915	993	5	8.96
801271	CHEYENNE LIND WINTER	C1008885	HRW	67.2	65.7	7.0	955	862	2	7.87
801272	MORO	C1013740	CLUB	53.8	54.7	2.8	795	845	8	8.96
801273	MCCALL	C1013842	HRW	66.9	66.8	5.3	880	875	2	7.89
801274	WANSER	C1013844	HRW	66.8	65.8	3.7	975	906	2	7.91
801275	NUGAINES	C1013968	SWW	56.9	58.1	2.6	825	899	8	8.49
801276	LUKE	C1014586	SWW	55.9	56.8	2.8	810	864	6	9.05

DRILL STRIPS

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PULLMAN & LIND, WA

LABNUM	VARIETY	IDNO	CLASS	CODIC 4/	CAVOL	SCSOR	WTIN	NOSCO	RMKS
801242	MORO PULLMAN WINTER	CI013740	CLUB	9.28	1265	85.5	362	73	
801243	PAHA	CI014485	CLUB	9.37	1270	86.0	346	78	
801244	MCDERMID	CI014565	SWW	9.12	1190	77.5	349	81	
801245	LUKE	CI014586	SWW	9.00	1190	75.5	360	81	
801246	BARBEE	CI017417	CLUB	9.01	1175	77.5	360	72	
801247	DAWS	CI017419	SWW	8.40	1200	78.7	359	82	
801248	STEPHENS	CI017569	SWW	8.96	1270	83.5	353	78	
801249	FARO	CI017590	CLUB	9.04	1215	80.0	359	76	
801250	GREER	CI017725	SWW	8.53	1145	73.5	336	74	
801251	HATTON	CI017772	HRW	8.26					
801252	TYEE	CI017773	CLUB	9.02	1185	75.5	373	76	
801253	JACMAR		CLUB	9.35	1190	76.0	357	79	
801254	CREW	WA6472	CLUB	9.03	1200	78.0	360	79	
801255	OR7142		CLUB	8.64	1240	83.5	368	80	
801256	OR68007		SWW	8.57	1175	76.0	359	75	
801257	77-99		HRW	8.17					
801258	77-294		SWW	8.63	1185	77.0	344	80	
801259	BAART PULLMAN SPRING	CI001697	SWS	8.89	1245	83.5	374	83	
801260	TWIN	CI014588	SWS	8.80	1170	73.5	346	82	
801261	PEAK 72	CI015319	HRS	8.04					
801262	WARED	CI015926	HRS	8.12					
801263	BORAH	CI017267	HRS	8.50					
801264	URQUIE	CI017413	SWS	8.62	1265	82.0	351	82	
801265	SAWTELL	CI017424	HRS	8.21					
801266	WAMPUM	CI017691	HRS	8.38					
801267	WALLADAY	CI017759	SWS	8.90	1205	76.5	340	79	
801268	WAVERLY (WA6402)	CI017911	SWS	8.67	1270	77.5	349	78	
801269	OWEN (ID 185)	CI017904	SWS	8.89	1225	78.0	362	77	
801270	ID 195		SWS	8.82	1215	78.0	358	77	
801271	CHEYENNE LIND WINTER	CI008885	HRW	7.99					
801272	MORO	CI013740	CLUB	8.88	1145	77.0	348	79	
801273	MCCALL	CI013842	HRW	7.90					
801274	WANSER	CI013844	HRW	7.99					
801275	NUGAINES	CI013968	SWW	8.35	1100	73.5	357	80	
801276	LUKE	CI014586	SWW	8.97	1140	76.0	361	81	

PULLMAN & LIND, WA

NURSCO 59

LABNUM	VARIETY	IDNO	CLASS	WPROT	FYELD	FASH 1/	MSCOR	FMIST	FPROT 1/	AGTRO
801277 SPRAGUE		C1015376	SWW	10.6	71.5	0.37	84.1	12.8	9.6	85.0
801278 BARBEE		C1017417	CLUB	9.9	72.1	0.38	84.7	13.1	9.1	71.5
801279 DAWS		C1017419	SWW	10.5	72.3	0.38	85.2	12.7	9.0	79.8
801280 FARO		C1017590	CLUB	9.8	73.9	0.38	88.3	13.1	8.8	80.5
801281 HATTON		C1017772	HRW	10.5	71.8	0.39	84.6	12.8	9.8	76.5
801282 TYEE		C1017773	CLUB	9.6	73.6	0.36	89.4	12.9	8.2	80.0
801283 CREW		WA6472	CLUB	9.8	74.2	0.36	90.7	12.9	8.6	79.0
801284 MARFED LIND SPRING		C1011919	SWS	11.7	70.4	0.36	80.6	12.9	10.2	75.0
801285 TWIN		C1014588	SWS	11.6	71.0	0.40	80.2	12.8	10.2	75.0
801286 PEAK 72		C1015319	HRS	14.3	70.3	0.39	83.1	13.8	13.3	70.0
801287 WARED		C1015926	HRS	12.8	72.4	0.40	85.9	13.8	11.8	78.0
801288 FIELDER		C1017268	SWS	11.3	68.7	0.38	79.0	13.2	9.7	74.5
801289 URQUIE		C1017413	SWS	10.5	72.3	0.37	83.8	14.1	9.8	80.0
801290 SAWTELL		C1017424	HRS	12.0	71.1	0.40	84.3	13.9	11.1	71.3
801291 FIELDWIN		C1017425	SWS	11.3	71.3	0.35	85.1	13.1	9.7	77.0
801292 WAMPUM		C1017691	HRS	12.6	71.0	0.44	81.8	13.7	11.4	71.0
801293 WA6510		HRS	6/	12.2	72.0	0.44	83.4	13.9	11.2	80.5

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/

Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS:

These commercial varieties and a few advanced selections were grown by the Agronomy and Soils Dept.,

Washington State University to provide research material for the Laboratory. They were grown at both

Pullman and Lind, WA. The two new club selections WA6472(Crew) and OR7142 appear to be typical clubs with

good cookie diameters, sponge cake scores, and noodle scores. The viscosity value of OR7142 is higher and

similar to Moro while WA6472 is low like older PNW clubs. The two SNW selections OR68007 and 77-294(WA)

also gave good overall performances except for the flour yield of 77-294, which was low. A new HRW

selection 77-99 was also low in flour yield but had good bread baking properties. Three new SWS selections

WA6402(Waverly), ID185(Owens), and ID195 had good cookie spread, excellent sponge cake values and fair cake

scores, and good noodle scores. ID185 was suprisingly good in bread making indicating a dual purpose

characteristic. A HRS selection WA6510 in the Lind nursery, milled better than Wampum but poorer than

Wared and was poorer than both in bread making loaf volume.

LABNUM	VARIETY	IDNO	CLASS	MABSC	MTYPE	FABS	FPEAK	FSTAB	VISC	VISCC
				3/						
801277 SPRAGUE		CI015376	SWW	53.0	1M				98	106
801278 BARBEE		CI017417	CLUB	48.9	1M				39	46
801279 DAWS		CI017419	SWW	54.5	3M				113	141
801280 FARO		CI017590	CLUB	52.2	2M				79	103
801281 HATTON		CI017772	HRW	58.8	4M	61.1	5.7	5.0		
801282 TYEE		CI017773	CLUB	53.5	3M				76	117
801283 CREW		WA6472	CLUB	51.1	1M				50	68
801284 MARFED LIND SPRING		CI011919	SWS	56.0	3M				151	145
801285 TWIN		CI014588	SWS	54.4	2M				89	86
801286 PEAK 72		CI015319	HRS	63.5	8H	68.3	29.6	8.4		
801287 WARED		CI015926	HRS	60.5	4H		7.2	5.3		
801288 FIELDER		CI017268	SWS	54.4	2M	63.2			120	128
801289 URQUIE		CI017413	SWS	54.3	2M				116	121
801290 SAWTELL		CI017424	HRS	58.8	5H	59.6	12.0	8.2		
801291 FIELDWIN		CI017425	SWS	52.8	2M				133	142
801292 WAMPUM		CI017691	HRS	60.3	4H	59.3	9.5	2.5		
801293 WA6510			HRS	59.2	4H	61.6	6.4	4.6		

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PULLMAN & LIND, WA

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI
					3/			4/		
801277 SPRAGUE		CI015376	SWW	54.8	55.2	1.6	720	744	8	8.69
801278 BARBEE		CI017417	CLUB	50.7	51.6	1.3	585	635	9	8.92
801279 DAWS		CI017419	SWW	56.7	57.7	2.3	820	880	4	8.46
801280 FARO		CI017590	CLUB	54.2	55.4	2.1	700	766	8	8.65
801281 HATTON		CI017772	HRW	60.8	61.0	2.8	843	855	2	8.09
801282 TYEE		CI017773	CLUB	53.9	55.7	2.5	757	856	8	9.06
801283 CREW		WA6472	CLUB	49.9	51.3	1.0	670	747	9	9.04
801284 MARFED LIND SPRING		CI011919	SWS	57.4	57.2	2.0	1037	1025	2	8.87
801285 TWIN		CI014588	SWS	53.8	53.6	1.0	865	853	9	9.20
801286 PEAK 72		CI015319	HRS	72.0	68.7	10.8	1055	850	2	7.75
801287 WARED		CI015926	HRS	65.0	63.2	3.3	1053	941	2	8.04
801288 FIELDER		CI017268	SWS	54.3	54.6	1.2	910	928	7	9.11
801289 URQUIE		CI017413	SWS	56.8	57.0	1.2	950	962	5	8.85
801290 SAWTELL		CI017424	HRS	62.6	61.5	5.4	1049	981	1	8.05
801291 FIELDWIN		CI017425	SWS	55.2	55.5	1.5	875	893	8	8.90
801292 WAMPUM		CI017691	HRS	63.9	62.5	4.5	1076	989	2	8.26
801293 WA6510			HRS	63.6	62.4	3.3	979	905	2	8.00

DRILL STRIPS

PULLMAN & LIND, WA

NURSCO 59

LABNUM	VARIETY	IDNO	CLASS	CODIC	CAVOL	SCSOR	WTIN	NOSCO	RMKS
				<u>4/</u>					
801277 SPRAGUE		CI015376	SWW	8.66	1095	72.0	359	77	
801278 BARBEE		CI017417	CLUB	8.86	1150	72.5	358	81	
801279 DAWS		CI017419	SWW	8.35	1055	65.5	355	79	
801280 FARO		CI017590	CLUB	8.56	1165	75.5	344	79	
801281 HATTON		CI017772	HRW	8.07					
801282 TYEE		CI017773	CLUB	8.93	1135	76.5	369	81	
801283 CREW		WA6472	CLUB	8.94	1140	72.5	363	79	
801284 MARFED LIND SPRING		CI011919	SWS	8.90	1145	71.0	349	80	
801285 TWIN		CI014588	SWS	9.23	1120	72.0	355	80	
801286 PEAK 72		CI015319	HRS	8.01					
801287 WARED		CI015926	HRS	8.18					
801288 FIELDER		CI017268	SWS	9.08	1095	69.5	369	68	
801289 URQUITE		CI017413	SWS	8.83	1180	78.0	362	81	
801290 SAWTELL		CI017424	HRS	8.14					
801291 FIELDWIN		CI017425	SWS	8.87	1175	77.0	360	69	
801292 WAMPUM		CI017691	HRS	8.37					
801293 WA6510			HRS	8.10					

NURSCO 60

LIND, WA (IRRIG)

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
801294	WAMPUM (SPRING)	CI017691	HRS	62.0	74.4	0.49	84.4	11.7	61.0	2H
801295	WA6701		SWW	62.0						
801296	WA6704		HRS	62.4	74.5	0.50	83.8	9.8	58.0	3M
801297	WA6705		HRS	63.2	74.4	0.50	83.7	9.9	58.9	3M
801298	WA6706		HRS	62.4	74.8	0.48	85.4	9.6	58.0	3M
801299	WA6707		HRS	62.0	73.2	0.47	84.2	9.8	57.4	3M
801300	WA6708		HRS	63.2	74.2	0.47	85.2	9.7	58.1	4M
801301	WA6709		HRS	62.0	74.8	0.51	84.0	10.5	56.1	3M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

COMMENTS: All of the selections in this nursery are unacceptable in baking quality. All gave low loaf volume and coarse, heavy crumb grains.

WESTERN WHEAT
PULLMAN, WA.

WESTERN FACULTATIVE

NURSCO 60

LIND, WA (IRRIG)

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	BAB3	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR
801294	WAMPUM (SPRING)	CI017691	HRS	64.9	63.2	2.9	1017	912	2
801295	WA6701		SWW						
801296	WA6704		HRS	61.0	61.2	2.6	750	762	8
801297	WA6705		HRS	62.0	62.1	2.8	750	756	8
801298	WA6706		HRS	60.8	61.2	2.8	818	843	8
801299	WA6707		HRS	60.4	60.6	2.9	760	772	9
801300	WA6708		HRS	60.0	60.3	3.3	800	819	6
801301	WA6709		HRS	58.8	58.3	2.5	782	751	9

NURSCO 61

FRANKLIN CO., ID

W. POPE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	BABS
801302 ITANA		C1012933	HRW	58.0	72.6	0.38	88.3	12.9	59.1	5H	61.2
801303 ARK		C1015286	HRW	60.4	73.0	0.42	86.5	11.6	62.1	2H	64.9
801304 5191			HRW	61.2	73.4	0.43	86.5	14.9	63.2	2H	69.3
801305 5192			SRW	58.8	70.9	0.46	81.8	13.6	59.5	1H	
801306 5193			SRW	62.0	71.6	0.47	82.2	13.4	58.2	1H	
801307 5194			SRW 6/	62.0	72.1	0.45	84.3	13.6	58.4	1H	
801308 5195			HRW	62.0	72.7	0.40	87.3	14.8	64.6	2H	69.6
801309 5196			SRW	56.8	69.2	0.45	80.5	13.5	53.9	1H	
801310 5197			HRW 6/	60.8	72.4	0.45	84.4	12.9	57.6	3M	59.0
801311 5198			SRW	59.2	70.8	0.41	85.1	11.8	59.1	3M	
801312 5199			HRW	56.4	72.3	0.43	85.3	14.7	62.6	2H	67.5
801313 5200			HRW 6/	60.8	72.8	0.40	87.6	13.4	62.4	6M	66.0
801314 5201			SRW 5/	60.8	72.8	0.42	87.0	12.6	59.0	2H	
801315 5202			SRW 6/	61.2	72.0	0.42	85.9	13.5	60.1	4M	
801316 5203			HRW 5/	60.4	74.2	0.39	89.4	14.2	63.6	5H	68.0
801317 5204			SRW 6/	60.4	71.7	0.38	88.2	12.5	59.2	3M	
801318 5205			HRW 6/	59.6	72.0	0.38	87.7	14.1	61.8	5H	66.1
801319 5206			HRW	57.6	69.5	0.46	81.1	13.3	60.4	4H	65.4
801320 5207			HRW	60.4	72.6	0.45	84.7	13.7	63.2	2H	68.6
801321 5208			HRW 5/	60.8	75.7	0.40	90.3	13.6	62.7	4H	66.5
801322 5209			HRW 6/	60.4	75.0	0.38	90.9	14.4	62.1	5H	66.7
801323 5210			SRW	59.2	71.2	0.46	82.6	11.9	59.1	4M	
801324 5211			HRW 6/	59.6	74.1	0.43	87.5	14.2	62.1	4H	66.5
801325 5212			HRW 6/	59.2	75.2	0.40	89.9	13.9	63.3	5H	68.4
801326 5213			HRW 5/	60.0	75.7	0.40	90.5	13.6	62.1	5H	66.9
801327 5214			HRW	59.2	76.3	0.47	87.6	12.7	60.1	2H	62.5
801328 5216			HRW	62.0	73.5	0.40	88.2	14.8	61.7	2H	66.7
801329 5217			SRW	62.0	70.0	0.39	85.4	13.9	60.1	2H	
801330 5218			HRW 6/	60.8	70.9	0.36	87.4	13.3	59.9	3M	62.9
801331 14-1			SRW	60.8	69.2	0.41	83.3	14.2	60.3	2H	
801332 22-4			SRW	59.2	70.5	0.47	80.9	13.1	60.3	4M	
801333 148-5-12		C1009342	HRW	61.2	75.7	0.49	85.8	12.1	57.4	1H	
801334 141-5-38		ID55/19	SRW 6/	61.2	73.9	0.41	88.8	12.6	58.5	1H	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 13% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

4/ Observed values Corrected to 13% Protein.

NURSCO 61

FRANKLIN CO., ID

W. POPE

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
				3/			4/			4/	
801302	ITANA	C1012933 C1015286	HRW	61.3	4.1	1040	1046	2	8.55	8.54	
801303	ARK		HRW	66.3	5.0	985	1072	2	8.52	8.41	
801304	5191		HRW	67.4	1.9	1086	968	2	8.17	8.33	S.MTIME, L.LVOL
801305	5192		SRW						8.97	9.04	POOR FYELD
801306	5193		SRW						8.70	8.74	POOR FYELD
801307	5194	SRW	SRW						8.70	8.77	
801308	5195		HRW	67.8	1.9	1064	952	2	8.16	8.31	S.MTIME, L.LVOL
801309	5196		SRW						8.85	8.90	POOR FYELD
801310	5197		HRW	59.1	2.2	946	952	3	8.70	8.69	POOR LVOL
801311	5198		SRW						8.89	8.76	
801312	5199	HRW	HRW	65.8	2.3	1040	935	2	8.32	8.46	POOR LVOL
801313	5200		SRW	65.6	3.4	1006	981	2	8.31	8.34	
801314	5201		SRW						9.22	9.18	
801315	5202		SRW						8.92	8.98	
801316	5203		HRW	66.8	4.7	1108	1034	2	8.42	8.52	
801317	5204	SRW	SRW						8.87	8.82	
801318	5205		HRW	65.0	4.9	1081	1013	2	8.34	8.43	
801319	5206		HRW	65.1	3.5	980	961	2	8.35	8.37	POOR FYELD, L.LVO
801320	5207		HRW	67.9	2.0	1010	967	2	8.07	8.13	LOW LVOL
801321	5208		HRW	65.9	3.2	1088	1051	2	8.55	8.60	
801322	5209	HRW	HRW	65.3	4.2	1085	998	2	8.47	8.59	LOW MSCOR
801323	5210		SRW						8.76	8.64	
801324	5211		HRW	65.3	2.9	1070	996	2	8.49	8.58	
801325	5212		HRW	67.5	3.7	1055	999	2	8.35	8.42	
801326	5213		HRW	66.3	4.8	1070	1033	2	8.37	8.42	
801327	5214	HRW	HRW	62.8	1.8	937	956	3	8.44	8.41	L.LVOL, S.MTIME
801328	5216		HRW	64.9	2.0	1070	958	2	8.22	8.37	L.LVOL, S.MTIME
801329	5217		SRW						8.57	8.67	
801330	5218		HRW	62.6	2.3	1025	1006	2	8.62	8.65	POOR FYELD
801331	14-1		SRW						8.80	8.93	
801332	22-4	C1009342 ID55/19	SRW						8.62	8.64	POOR FYELD
801333	148-5-12		HRW						8.50	8.43	SHORT MIXING
801334	141-5-38		SRW						9.07	9.03	

COMMENTS: Many of these red wheats have soft endosperm and were detected by near infra-red analysis and was generally confirmed by cookie baking data. See the REMARKS column for deficiencies of selections not footnoted as promising. The soft red wheats should be converted to white seed coat.

NURSCO 62

MOSCOW, ID

W. POPE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
801335	NUGAINES B-11-2/5.5	C1013968	SWW	48.0	65.1	0.55	68.7	9.1		8.76	8.66	
801336	B-11-3/6.5	C1013968	SWW	54.0	68.4	0.50	76.1	9.3		8.79	8.71	
801337	B-11-4/7	C1013968	SWW	56.0	70.6	0.51	78.4	9.2		8.99	8.90	
801338	B-11-5/7.5	C1013968	SWW	57.6	71.9	0.49	81.7	9.1		8.77	8.68	
801339	B-11-6/8	C1013968	SWW	57.6	72.2	0.47	83.2	9.0		8.89	8.78	
801340	PECK W171-180/5.5 NON-BURN	C1014587	SWW	44.8	60.8	0.59	61.0	10.3		8.51	8.55	
801341	W171-180/5.5 BURN	C1014587	SWW	42.8	59.8	0.59	59.6	10.7		8.27	8.35	
801342	W171-180/6.5 NON-BURN	C1014587	SWW	51.6	67.6	0.55	72.0	10.7		8.60	8.68	
801343	W171-180/6.5 BURN	C1014587	SWW	49.6	65.4	0.56	68.7	11.0		8.50	8.61	
801344	W171-180/7 NON-BURN	C1014587	SWW	56.4	71.7	0.53	78.4	10.6		8.80	8.87	
801345	W171-180/7 BURN	C1014587	SWW	52.8	67.7	0.54	72.8	11.0		8.66	8.77	
801346	W171-180/7.5 NON-BURN	C1014587	SWW	57.6	71.5	0.53	78.4	10.7		8.75	8.83	
801347	W171-180/7.5 BURN	C1014587	SWW	57.2	71.6	0.52	78.9	10.8		8.72	8.81	
801348	ARK B-91-4/6.5	C1015286	SRW	58.8	71.3	0.44	84.9	9.6		8.74	8.69	
801349	B-91-5/7	C1015286	HRW	60.4	71.9	0.43	85.2	9.3		8.55	8.49	
801350	B-91-6/7.5	C1015286	HRW	60.8	72.4	0.42	86.1	9.7		8.39	8.36	
801351	B-91-7/8	C1015286	HRW	60.8	72.4	0.42	86.1	10.0		8.34	8.34	
801352	B-91-8/8.5	C1015286	HRW	60.4	72.5	0.42	86.3	10.5		8.34	8.38	
PECK AVERAGE NON-BURN												
	BURN			52.6	67.9	0.55	72.5	10.6		8.67	8.73	
				50.6	66.1	0.55	70.0	10.9		8.54	8.64	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein. 5/ Particularly Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein. 6/ Promising Overall Quality Characteristics.

COMMENTS: Seeds of Nugaines, Peck, and Ark were stratified by passing over screens of a 2B clipper at 1/2 of 64th sizes. As seed size increased test weight, flour yield, milling score and cookie diameter increased. Protein appeared constant within seed sizes for Nugaines and Peck, but generally increased with size the Ark sample. Within the Peck varieties a burning treatment was studied. Burning lowered all of the quality factors.

NURSCO 63

FAR EAST

LABNUM	VARIETY	IDNO	CLASS	WPROT %	FYIELD %	FASH %	MSCOR	FMIST %	FPROT %	AGTRO
801353	AUSTRALIAN FAIR AVG QUAL		SWS		71.0	0.43	79.9	12.5	9.4	75.0
PNW	Average Soft White Winter (1980 Crop)		SWW		71.8	0.43	81.7		8.7	79.6
PNW	Average Club (1980 Crop)		CLUB		72.9	0.43	84.5		8.6	78.4
LABNUM	VARIETY	IDNO	CLASS	WPROT %	FYIELD %	FASH %	MSCOR	FMIST %	FPROT %	AGTRO
801353	AUSTRALIAN FAIR AVG QUAL		SWS		71.0	0.43	79.9	12.5	9.4	75.0
PNW	Average Soft White Winter (1980 Crop)		SWW		71.8	0.43	81.7		8.7	79.6
PNW	Average Club (1980 Crop)		CLUB		72.9	0.43	84.5		8.6	78.4
LABNUM	VARIETY	IDNO	CLASS	WPROT %	FYIELD %	FASH %	MSCOR	FMIST %	FPROT %	AGTRO
801353	AUSTRALIAN FAIR AVG QUAL		SWS		71.0	0.43	79.9	12.5	9.4	75.0
PNW	Average Soft White Winter (1980 Crop)		SWW		71.8	0.43	81.7		8.7	79.6
PNW	Average Club (1980 Crop)		CLUB		72.9	0.43	84.5		8.6	78.4

COMMENTS: The evaluation of an Australian ASW wheat sample was done in co-operation with U.S. Wheat Associates, who submitted the sample taken from a cargo in Indonesia. A comparison is made with averaged weighted data of analysis from the 1980 crop. The sample was slightly poorer in milling than the PNW soft white winter and significantly poorer than PNW club. Flour color was darker (lower Agtron reading) while flour ash was the same (.43). Bread baking showed the flour to be considerable stronger (higher water absorption, longer mixing requirement, and significantly larger loaf volume and better crumb grain). Similarly cookie diameter was significantly lower (8.40 cm to 8.82 or 9.09 cm). Sponge cake volume and score for the ASW was very poor. In noodle making properties the ASW was similar in noodle yield (WTIN = % weight increase) and slightly better in overall noodle score.

NURSCO 64

PL, WW, & POM, WA

K. MORRISON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
801354	PAHA FND* PULLMAN	CI014485	CLUB	58.0	76.1	0.49	87.0	8.4	50.7	9.64	9.67	2L
801355	PAHA REG	CI014485	CLUB	58.4	76.0	0.48	87.0	8.0	51.3	9.42	9.42	2L
801356	PAHA CRT	CI014485	CLUB	59.2	76.0	0.48	87.5	8.1	50.2	9.34	9.34	2L
801357	PAHA 1C	CI014485	CLUB	58.8	76.3	0.48	87.9	8.8	51.0	9.54	9.59	2L
801358	PAHA 2C	CI014485	CLUB	57.6	74.9	0.50	84.6	9.5	51.1	9.30	9.41	2L
801359	PAHA 3C	CI014485	CLUB	58.8	75.3	0.47	86.9	8.2	50.7	9.52	9.54	2L
801360	PAHA 4C	CI014485	CLUB	58.4	75.2	0.47	86.8	8.3	50.3	9.40	9.42	2L
801361	NUGAINES FND	CI013968	SWM	57.6	70.8	0.48	80.8	9.5	53.6	8.95	9.11	3M
801362	NUGAINES REG	CI013968	SWM	57.6	69.5	0.47	79.9	9.3	53.8	9.12	9.27	3M
801363	NUGAINES CRT	CI013968	SWM	55.6	68.3	0.49	76.9	10.0	54.3	9.04	9.26	3M
801364	NUGAINES 1C	CI013968	SWM	57.2	69.1	0.47	79.0	9.2	55.2	8.92	9.06	3M
801365	NUGAINES 2C	CI013968	SWM	57.6	69.2	0.47	79.3	8.7	53.6	9.02	9.10	3L
801366	NUGAINES 3C	CI013968	SWM	58.0	69.8	0.47	80.2	8.6	53.7	8.90	8.97	3M
801367	NUGAINES 4C	CI013968	SWM	57.2	69.5	0.51	76.9	9.6	53.7	8.85	9.03	3M
801368	LUKE FND	CI014586	SWM	58.0	73.0	0.48	83.4	8.5	52.8	9.30	9.35	3L
801369	LUKE REG	CI014586	SWM	58.4	73.1	0.50	82.6	8.6	52.7	9.25	9.32	3L
801370	LUKE CRT	CI014586	SWM	58.4	73.3	0.48	83.8	7.7	52.6	9.56	9.53	3L
801371	LUKE 1C	CI014586	SWM	57.6	72.9	0.49	83.0	8.6	52.5	9.54	9.60	3L
801372	LUKE 2C	CI014586	SWM	57.2	72.8	0.44	85.5	7.4	52.9	9.51	9.45	2L
801373	LUKE 3C	CI014586	SWM	58.4	72.3	0.47	83.2	8.6	52.8	9.45	9.52	3L
801374	LUKE 4C	CI014586	SWM	57.6	72.4	0.48	82.6	8.8	52.3	9.35	9.44	3L
801375	PAHA FND REP 2	CI014485	CLUB	57.2	73.7	0.49	83.9	9.7	49.3	9.36	9.48	2M
801376	PAHA REG	CI014485	CLUB	58.8	75.0	0.47	86.5	8.4	50.4	9.49	9.52	2M
801377	PAHA CRT	CI014485	CLUB	58.0	74.8	0.52	83.4	9.0	50.0	9.37	9.45	2M
801378	PAHA 1C	CI014485	CLUB	57.2	75.5	0.51	84.9	8.3	50.3	9.52	9.55	2M
801379	PAHA 2C	CI014485	CLUB	58.4	75.5	0.50	85.3	8.3	50.5	9.50	9.52	2M
801380	PAHA 3C	CI014485	CLUB	57.6	74.5	0.49	84.5	9.4	50.5	9.26	9.36	2M
801381	PAHA 4C	CI014485	CLUB	58.8	75.8	0.49	86.3	8.0	50.4	9.67	9.67	2L
801382	NUGAINES FND	CI013968	SWM	58.0	70.8	0.51	79.0	8.6	54.8	9.21	9.28	3M
801383	NUGAINES REG	CI013968	SWM	59.2	71.9	0.49	81.7	8.3	55.2	9.04	9.07	3M
801384	NUGAINES CRT	CI013968	SWM	56.8	69.2	0.50	77.4	9.2	55.7	8.84	8.97	3M
801385	NUGAINES 1C	CI013968	SWM	56.0	69.1	0.53	75.4	9.8	56.1	8.71	8.91	3M
801386	NUGAINES 2C	CI013968	SWM	56.4	71.0	0.55	76.3	9.5	55.6	8.90	9.06	3M
801387	NUGAINES 3C	CI013968	SWM	57.2	68.9	0.53	75.3	9.4	56.0	8.89	9.04	3M
801388	NUGAINES 4C	CI013968	SWM	59.2	69.7	0.50	78.2	8.2	56.7	8.99	9.01	3L

* FND = Foundation, REG = Registered, 1C through 4C = first certified through fourth generation certified.

NURSCO 64

PL, WW, & POM, WA

K. MORRISON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
801389	LUKE FND	C1014586	SWW	59.6	72.9	0.52	80.9	8.6	53.2	9.24	9.30	3M
801390	LUKE REG	C1014586	SWW	57.6	71.7	0.46	83.2	9.1	53.6	9.40	9.52	4M
801391	LUKE CRT	C1014586	SWW	58.8	72.3	0.43	85.5	7.6	52.7	9.72	9.68	3L
801392	LUKE 1C	C1014586	SWW	56.4	70.9	0.46	82.0	9.6	53.5	9.21	9.39	4M
801393	LUKE 2C	C1014586	SWW	57.2	72.2	0.46	83.9	8.5	53.3	9.39	9.44	3L
801394	LUKE 3C	C1014586	SWW	58.0	71.8	0.45	83.8	8.1	53.5	9.32	9.34	4L
801395	LUKE 4C	C1014586	SWW	57.6	71.5	0.46	83.1	9.0	53.5	9.51	9.62	3M
801396	PAHA FND REP 3	C1014485	CLUB	58.0	73.9	0.47	85.3	8.8	50.9	9.71	9.77	2M
801397	PAHA REG	C1014485	CLUB	58.0	74.4	0.46	86.5	7.9	51.2	9.46	9.46	2M
801398	PAHA CRT	C1014485	CLUB	58.8	74.7	0.47	86.2	8.4	50.7	9.36	9.39	2M
801399	PAHA 1C	C1014485	CLUB	58.0	73.7	0.46	85.5	8.6	50.1	9.50	9.54	2M
801400	PAHA 2C	C1014485	CLUB	58.4	73.5	0.47	85.0	9.5	50.6	9.59	9.69	2M
801401	PAHA 3C	C1014485	CLUB	58.0	73.4	0.43	87.2	9.5	50.8	9.45	9.56	2M
801402	PAHA 4C	C1014485	CLUB	58.4	74.2	0.49	84.1	8.2	51.8	9.46	9.48	2M
801403	NUGAINES FND	C1013968	SWW	57.6	68.1	0.50	75.9	9.3	55.5	8.94	9.08	3M
801404	NUGAINES REG	C1013968	SWW	58.4	69.1	0.48	78.5	8.4	55.9	9.27	9.32	3M
801405	NUGAINES CRT	C1013968	SWW	58.0	68.6	0.48	77.7	8.8	55.3	9.24	9.33	3M
801406	NUGAINES 1C	C1013968	SWW	57.6	67.6	0.49	76.1	9.0	55.1	8.96	9.07	3M
801407	NUGAINES 2C	C1013968	SWW	57.2	67.0	0.46	76.9	8.6	57.1	8.84	8.90	3M
801408	NUGAINES 3C	C1013968	SWW	58.0	68.7	0.45	79.6	8.6	54.2	8.96	9.03	3M
801409	NUGAINES 4C	C1013968	SWW	57.6	68.3	0.48	77.3	8.9	56.2	8.96	9.06	3M
801410	LUKE FND	C1014586	SWW	58.0	72.0	0.48	82.3	8.6	53.1	9.49	9.55	3M
801411	LUKE REG	C1014586	SWW	58.4	72.8	0.48	83.3	8.6	53.7	9.29	9.35	3M
801412	LUKE CRT	C1014586	SWW	58.0	74.0	0.50	83.4	7.7	54.1	9.26	9.23	3L
801413	LUKE 1C	C1014586	SWW	57.6	73.6	0.51	82.4	8.8	53.9	9.17	9.26	3M
801414	LUKE 2C	C1014586	SWW	58.4	73.4	0.51	82.2	8.5	53.5	9.49	9.54	3L
801415	LUKE 3C	C1014586	SWW	58.8	73.4	0.50	82.7	8.1	53.4	9.34	9.35	3L
801416	LUKE 4C	C1014586	SWW	59.2	73.8	0.50	82.9	7.4	53.1	9.54	9.47	3L
801417	PAHA FND WALLA WALLA	C1014485	CLUB	65.2	77.2	0.46	89.9	8.7	50.3	9.17	9.25	1M
801418	PAHA REG	C1014485	CLUB	65.6	77.0	0.45	90.7	9.6	49.5	9.29	9.46	1M
801419	PAHA CRT	C1014485	CLUB	64.8	77.4	0.46	90.1	8.4	49.7	9.40	9.44	1M
801420	PAHA 1C	C1014485	CLUB	65.2	77.6	0.45	91.0	8.9	49.6	9.36	9.46	1M
801421	PAHA 2C	C1014485	CLUB	64.8	77.2	0.45	91.0	8.9	50.2	9.19	9.29	1M
801422	PAHA 3C	C1014485	CLUB	65.6	77.0	0.44	91.1	8.9	50.0	9.49	9.59	1M
801423	PAHA 4C	C1014485	CLUB	64.0	76.7	0.47	88.8	8.5	49.6	9.47	9.53	1M

SEED GENERATION TRIALS

NURSCO 64

PL, WW, & POM, WA

K. MORRISON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
801424	NUGAINES FND	C1013968	SWW	64.8	74.0	0.44	87.2	8.5	54.7	9.30	9.35	2M
801425	NUGAINES REG	C1013968	SWW	65.2	73.6	0.40	89.4	8.8	54.2	9.00	9.09	2M
801426	NUGAINES CRT	C1013968	SWW	65.6	73.4	0.38	90.5	8.5	53.3	8.89	8.94	3M
801427	NUGAINES 1C	C1013968	SWW	65.6	73.6	0.39	89.9	8.7	53.2	9.02	9.10	3M
801428	NUGAINES 2C	C1013968	SWW	65.2	74.0	0.38	90.8	8.5	53.0	9.05	9.10	3M
801429	NUGAINES 3C	C1013968	SWW	65.6	73.7	0.38	90.9	8.6	52.9	9.04	9.10	3M
801430	NUGAINES 4C	C1013968	SWW	65.6	73.3	0.39	89.8	8.2	53.8	9.10	9.12	3M
801431	LUKE FND	C1014586	SWW	64.0	75.0	0.40	91.1	8.4	52.2	9.36	9.41	3M
801432	LUKE REG	C1014586	SWW	64.0	75.0	0.39	91.6	8.7	52.4	9.46	9.54	3M
801433	LUKE CRT	C1014586	SWW	65.2	74.7	0.38	91.9	8.8	51.1	9.59	9.68	3M
801434	LUKE 1C	C1014586	SWW	65.2	74.9	0.38	92.4	8.6	51.9	9.30	9.37	3M
801435	LUKE 2C	C1014586	SWW	64.8	75.1	0.40	91.5	8.8	52.6	9.26	9.35	3M
801436	LUKE 3C	C1014586	SWW	64.8	75.4	0.40	91.8	8.6	51.8	9.26	9.33	3M
801437	LUKE 4C	C1014586	SWW	64.4	75.3	0.39	92.0	8.5	52.4	9.65	9.70	3M
801438	PAHA FND REP 2	WALLA WALL	CLUB	64.4	77.0	0.39	94.6	8.5	49.6	9.32	9.36	2M
801439	PAHA REG	WALLA WALL	CLUB	64.8	77.1	0.40	93.5	8.9	49.7	9.44	9.50	2M
801440	PAHA CERT	WALLA WALL	CLUB	64.8	77.2	0.42	92.5	8.7	49.8	9.29	9.34	2M
801441	PAHA 1C	WALLA WALL	CLUB	64.4	76.8	0.42	92.0	8.8	49.7	9.25	9.31	2M
801442	PAHA 2C	WALLA WALL	CLUB	64.8	76.6	0.42	91.8	9.0	50.0	9.26	9.33	2M
801443	PAHA 3C	WALLA WALL	CLUB	64.4	76.8	0.41	92.5	8.5	49.0	9.35	9.39	2M
801444	PAHA 4C	WALLA WALL	CLUB	64.8	76.6	0.41	92.6	9.0	49.0	9.44	9.51	2M
801445	NUGAINES FND	WALLA WALL	SWW	64.8	74.0	0.40	89.8	8.7	53.5	9.22	9.30	2M
801446	NUGAINES REG	WALLA WALL	SWW	64.8	73.3	0.40	88.9	8.5	53.4	8.92	8.98	2M
801447	NUGAINES CERT	WALLA WALL	SWW	64.8	73.8	0.40	89.6	8.5	53.4	8.96	9.02	2M
801448	NUGAINES 1C	WALLA WALL	SWW	64.8	74.0	0.40	89.8	8.6	53.6	9.20	9.27	2M
801449	NUGAINES 2C	WALLA WALL	SWW	64.4	74.6	0.40	90.4	8.7	53.5	9.20	9.28	2M
801450	NUGAINES 3C	WALLA WALL	SWW	64.8	74.5	0.40	90.2	8.7	53.7	9.37	9.45	2M
801451	NUGAINES 4C	WALLA WALL	SWW	65.6	75.5	0.42	90.7	8.3	52.7	9.52	9.56	2M
801452	LUKE FND	WALLA WALL	SWW	64.0	75.5	0.42	90.5	8.6	51.9	9.19	9.25	3M
801453	LUKE REG	WALLA WALL	SWW	64.0	75.2	0.42	89.9	8.8	52.6	9.42	9.51	3M
801454	LUKE CERT	WALLA WALL	SWW	64.4	74.8	0.42	89.3	9.1	52.9	9.31	9.43	3M
801455	LUKE 1C	WALLA WALL	SWW	64.0	75.0	0.42	89.6	8.8	52.7	9.45	9.54	3M
801456	LUKE 2C	WALLA WALL	SWW	64.0	75.0	0.43	89.3	8.6	52.4	9.24	9.30	3M
801457	LUKE 3C	WALLA WALL	SWW	64.4	74.8	0.44	88.3	8.4	53.0	9.29	9.33	3M
801458	LUKE 4C	WALLA WALL	SWW	63.6	76.6	0.44	90.4	9.1	51.2	9.37	9.50	1M

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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
801459	PAHA FND REP 3	WALLA WALL	CLUB	65.2	76.9	0.44	90.9	9.6	49.3	9.47	9.59	1M
801460	PAHA REG	WALLA WALL	CLUB	65.6	77.3	0.45	90.8	9.1	49.3	9.35	9.43	1M
801461	PAHA CERT	WALLA WALL	CLUB	65.2	73.4	0.40	89.0	8.8	52.1	9.19	9.24	3M
801462	PAHA 1C	WALLA WALL	CLUB	64.8	77.2	0.43	91.9	8.6	50.8	9.11	9.16	1M
801463	PAHA 2C	WALLA WALL	CLUB	64.8	76.9	0.43	91.5	8.6	50.7	9.31	9.36	2M
801464	PAHA 3C	WALLA WALL	CLUB	64.4	77.2	0.43	92.2	8.6	50.0	9.34	9.38	2M
801465	PAHA 4C	WALLA WALL	CLUB	64.8	76.8	0.42	92.4	8.7	49.6	9.29	9.34	2M
801466	NUGAINES FND	WALLA WALL	SWW	65.2	73.6	0.38	90.4	8.7	53.9	9.07	9.15	2M
801467	NUGAINES REG	WALLA WALL	SWW	65.6	73.4	0.39	89.9	8.3	54.1	8.86	8.90	2M
801468	NUGAINES CERT	WALLA WALL	SWW	65.6	72.6	0.36	90.3	9.3	54.1	9.07	9.22	2M
801469	NUGAINES 1C	WALLA WALL	SWW	65.2	73.0	0.38	89.9	8.7	54.2	9.11	9.19	3M
801470	NUGAINES 2C	WALLA WALL	SWW	65.2	73.3	0.38	90.2	8.8	54.3	9.05	9.14	3M
801471	NUGAINES 3C	WALLA WALL	SWW	66.0	73.6	0.38	90.6	8.7	54.3	8.81	8.89	3M
801472	NUGAINES 4C	WALLA WALL	SWW	65.6	73.2	0.38	90.1	8.4	54.5	8.92	8.97	2M
801473	LUKE FND	WALLA WALL	SWW	64.0	74.7	0.41	90.3	8.2	50.8	9.41	9.43	2M
801474	LUKE REG	WALLA WALL	SWW	64.0	74.7	0.41	90.1	8.6	52.2	9.22	9.29	3M
801475	LUKE CERT	WALLA WALL	SWW	64.4	74.7	0.40	90.6	8.5	52.1	9.52	9.58	3M
801476	LUKE 1C	WALLA WALL	SWW	64.4	74.6	0.40	90.3	8.5	51.0	9.45	9.50	3M
801477	LUKE 2C	WALLA WALL	SWW	64.0	75.1	0.43	89.6	8.5	52.0	9.44	9.49	3M
801478	LUKE 3C	WALLA WALL	SWW	64.4	74.9	0.41	90.2	8.2	52.4	9.59	9.61	3M
801479	LUKE 4C	WALLA WALL	SWW	64.8	74.7	0.42	89.5	8.4	53.2	9.37	9.42	3M
801480	PAHA FND	POMEROY	CLUB	64.8	76.1	0.47	88.0	7.5	51.6	9.54	9.50	2L
801481	PAHA REG	POMEROY	CLUB	64.4	74.6	0.50	84.0	7.9	51.4	9.26	9.26	2L
801482	PAHA CERT	POMEROY	CLUB	64.0	75.5	0.48	86.7	8.4	51.0	9.40	9.43	2L
801483	PAHA 1C	POMEROY	CLUB	64.0	75.2	0.49	85.9	7.5	51.6	9.55	9.51	2L
801484	PAHA 2C	POMEROY	CLUB	64.4	75.0	0.49	85.6	7.6	51.2	9.22	9.20	2L
801485	PAHA 3C	POMEROY	CLUB	64.4	75.2	0.49	85.9	7.4	50.1	9.45	9.41	2L
801486	PAHA 4C	POMEROY	CLUB	64.4	75.3	0.48	86.4	7.8	49.7	9.60	9.59	2L
801487	NUGAINES FND	POMEROY	SWW	64.8	71.9	0.43	85.1	8.5	54.1	9.20	9.25	3M
801488	NUGAINES REG	POMEROY	SWW	65.2	71.8	0.43	85.4	7.7	55.2	9.27	9.24	3M
801489	NUGAINES CERT	POMEROY	SWW	64.8	70.9	0.42	84.8	7.3	55.3	9.11	9.04	3L
801490	NUGAINES 1C	POMEROY	SWW	65.6	71.3	0.42	85.3	7.5	54.0	9.15	9.09	2L
801491	NUGAINES 2C	POMEROY	SWW	64.8	72.0	0.43	85.7	7.3	55.5	9.29	9.21	3L
801492	NUGAINES 3C	POMEROY	SWW	64.8	72.3	0.43	85.5	6.8	54.7	9.10	8.97	3L
801493	NUGAINES 4C	POMEROY	SWW	64.8	72.6	0.45	85.2	7.8	54.5	9.05	9.03	3L

SEED GENERATION TRIALS

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K. MORRISON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
801494	LUKE FND	POMEROY	SWW	64.0	73.0	0.45	85.2	7.4	53.0	9.29	9.22	3L
801495	LUKE REG	POMEROY	SWW	64.0	73.5	0.46	85.2	7.6	53.9	9.30	9.26	3L
801496	LUKE CERT	POMEROY	SWW	64.0	73.5	0.46	85.1	7.4	53.9	9.24	9.17	3L
801497	LUKE 1C	POMEROY	SWW	64.0	73.6	0.48	84.4	7.9	53.1	9.47	9.46	3L
801498	LUKE 2C	POMEROY	SWW	64.0	73.9	0.45	86.3	7.8	53.3	9.31	9.29	3L
801499	LUKE 3C	POMEROY	SWW	63.6	73.5	0.43	87.5	7.2	54.1	9.31	9.22	3L
801500	LUKE 4C	POMEROY	SWW	64.8	73.2	0.43	86.8	7.7	54.1	9.44	9.40	3L
801501	PAHA FND REP 2	POMEROY	CLUB	64.8	76.1	0.45	89.2	8.1	50.0	9.14	9.14	1L
801502	PAHA REG	POMEROY	CLUB	64.0	75.4	0.46	87.9	7.2	51.0	9.55	9.49	1L
801503	PAHA CERT	POMEROY	CLUB	64.0	74.8	0.46	87.2	7.9	50.6	9.20	9.19	1L
801504	PAHA 1C	POMEROY	CLUB	64.0	75.0	0.46	87.4	7.4	50.7	9.45	9.41	1L
801505	PAHA 2C	POMEROY	CLUB	64.4	75.0	0.46	87.5	6.8	50.6	9.27	9.19	1L
801506	PAHA 3C	POMEROY	CLUB	64.8	75.7	0.45	88.9	8.1	51.4	9.66	9.67	1L
801507	PAHA 4C	POMEROY	CLUB	63.6	75.1	0.44	88.5	7.1	50.9	9.55	9.49	1L
801508	NUGAINES FND	POMEROY	SWW	65.2	71.8	0.41	86.5	7.5	55.3	9.04	8.98	3L
801509	NUGAINES REG	POMEROY	SWW	64.4	72.2	0.42	86.2	6.6	54.4	9.29	9.13	3L
801510	NUGAINES CERT	POMEROY	SWW	64.8	71.2	0.41	85.4	7.3	55.6	9.00	8.92	3L
801511	NUGAINES 1C	POMEROY	SWW	64.0	72.8	0.43	86.3	7.7	54.4	9.06	9.03	3L
801512	NUGAINES 2C	POMEROY	SWW	64.0	72.9	0.43	86.4	7.0	54.5	9.37	9.26	3L
801513	NUGAINES 3C	POMEROY	SWW	64.8	72.0	0.44	84.6	7.1	54.7	9.22	9.13	3L
801514	NUGAINES 4C	POMEROY	SWW	64.8	72.4	0.43	85.7	7.4	54.9	8.97	8.91	3L
801515	LUKE FND	POMEROY	SWW	63.6	72.5	0.43	85.8	6.1	55.0	9.35	9.14	3L
801516	LUKE REG	POMEROY	SWW	63.2	73.6	0.44	86.8	8.0	53.3	9.50	9.50	3L
801517	LUKE CERT	POMEROY	SWW	62.4	72.9	0.44	85.8	7.5	54.0	9.61	9.56	3L
801518	LUKE 1C	POMEROY	SWW	63.6	74.1	0.43	87.9	7.6	53.3	9.29	9.24	3L
801519	LUKE 2C	POMEROY	SWW	63.2	73.8	0.44	87.1	7.7	54.1	9.26	9.23	3L
801520	LUKE 3C	POMEROY	SWW	64.0	73.2	0.43	87.1	7.4	53.9	9.69	9.62	3L
801521	LUKE 4C	POMEROY	SWW	62.4	73.2	0.45	85.8	6.8	54.1	9.35	9.22	3L
801522	PAHA FND REP 3	POMEROY	CLUB	64.4	75.9	0.48	87.1	7.8	50.2	9.32	9.31	1L
801523	PAHA REG	POMEROY	CLUB	63.6	75.3	0.48	86.4	7.4	50.6	9.34	9.29	1L
801524	PAHA CERT	POMEROY	CLUB	63.2	74.5	0.47	86.2	7.5	50.8	9.37	9.34	1L
801525	PAHA 1C	POMEROY	CLUB	63.6	75.2	0.47	87.1	7.2	51.1	9.44	9.38	1L
801526	PAHA 2C	POMEROY	CLUB	63.6	75.0	0.48	86.1	7.2	49.9	9.62	9.57	1L
801527	PAHA 3C	POMEROY	CLUB	64.0	75.2	0.50	85.3	8.0	49.5	9.31	9.31	1L
801528	PAHA 4C	POMEROY	CLUB	64.0	75.3	0.48	86.4	7.2	49.8	9.56	9.51	1L

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LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	CODI	CODIC 4/	MTYPE
801529	NUGAINES FND	POMEROY	SWW	64.4	72.5	0.45	84.8	7.6	54.4	9.36	9.32	3L
801530	NUGAINES REG	POMEROY	SWW	64.4	72.9	0.43	86.4	7.0	53.8	9.05	8.94	3L
801531	NUGAINES CERT	POMEROY	SWW	64.8	73.5	0.43	87.2	7.7	54.3	9.06	9.03	2L
801532	NUGAINES 1C	POMEROY	SWW	64.0	72.3	0.43	85.8	7.7	54.6	9.06	9.03	2L
801533	NUGAINES 2C	POMEROY	SWW	64.0	71.7	0.44	84.5	7.9	52.5	9.02	9.01	2L
801534	NUGAINES 3C	POMEROY	SWW	64.4	72.7	0.44	85.7	7.9	53.6	8.97	8.96	2L
801535	NUGAINES 4C	POMEROY	SWW	65.6	71.5	0.44	83.8	8.0	54.8	8.87	8.87	3L
801536	LUKE FND	POMEROY	SWW	62.4	74.2	0.44	87.8	7.5	54.4	9.61	9.56	2L
801537	LUKE REG	POMEROY	SWW	63.6	73.4	0.44	86.7	6.9	53.9	9.26	9.14	5L
801538	LUKE CERT	POMEROY	SWW	63.2	74.3	0.46	86.2	7.6	52.9	9.27	9.23	3L
801539	LUKE 1C	POMEROY	SWW	64.0	74.1	0.45	86.9	7.7	52.7	9.54	9.50	3L
801540	LUKE 2C	POMEROY	SWW	64.0	72.9	0.45	85.1	7.5	52.9	9.35	9.29	3L
801541	LUKE 3C	POMEROY	SWW	63.6	73.2	0.45	85.6	7.5	52.9	9.42	9.37	3L
801542	LUKE 4C	POMEROY	SWW	63.2	74.1	0.46	86.1	7.6	52.3	9.67	9.63	3L

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

4/ Observed Values Corrected to 8% Protein.

5/

Particularly Promising Overall Quality Characteristics.

6/

Promising Overall Quality Characteristics.

COMMENTS:

This study was conducted to test the integrity of agronomic and quality characteristics of a variety through seven generations. Plots were grown of Paha, Nugaines, and Luke in triplicate at three locations (Pullman, Pomeroy, and Walla Walla). All end-use factors tested showed a high degree of stability from the first generation through the seventh. Analysis of variance showed no significant changes within the varieties. See the Summary Table on page 7, which is the means of 9 plots (3 Reps x 3 locations) for each generation of seed.

VARIETY AND GENERATION	TEST WEIGHT	FLOUR YIELD	FLOUR ASH	MILL SCORE	FLOUR PROT.	MABSC	COOKIE ABS.	COOKIE CORR.
LUKE 1 Generation	61.9	73.6	.448	86.4	8.0	52.9	9.36	9.36
2 Generation	61.9	73.6	.444	86.6	8.32	53.1	9.34	9.38
3 Generation	62.1	73.8	.441	86.8	8.0	52.9	9.45	9.45
4 Generation	61.9	73.7	.446	86.5	8.45	52.7	9.38	9.43
5 Generation	61.8	73.8	.445	86.6	8.17	53.0	9.36	9.37
6 Generation	62.2	73.6	.442	86.6	8.01	53.1	9.41	9.41
7 Generation	61.9	73.8	.447	86.5	8.14	52.9	9.47	9.49
NUGAINES 1 Generation	62.5	71.9	.444	84.3	8.54	54.4	9.14	9.20
2 Generation	62.7	71.9	.434	85.1	8.10	54.5	9.09	9.10
3 Generation	62.3	71.2	.430	84.4	8.51	54.6	9.02	9.12
4 Generation	62.2	71.4	.437	84.1	8.54	54.4	9.02	9.08
5 Generation	62.0	71.7	.437	84.5	8.33	54.4	9.08	9.12
6 Generation	62.6	71.8	.435	84.6	8.26	54.1	9.02	9.06
7 Generation	62.9	71.7	.444	84.2	8.31	54.6	9.02	9.06
PAHA 1 Generation	62.4	75.8	.460	88.4	8.56	50.2	9.41	9.45
2 Generation	62.6	75.8	.461	88.1	8.26	50.5	9.40	9.42
3 Generation	62.4	75.3	.462	87.6	8.35	50.5	9.32	9.35
4 Generation	62.2	75.8	.463	88.2	8.23	50.5	9.41	9.43
5 Generation	62.3	75.5	.466	87.6	8.38	50.5	9.36	9.39
6 Generation	62.4	75.6	.456	88.3	8.51	50.2	9.42	9.46
7 Generation	62.3	75.6	.461	88.0	8.08	50.1	9.49	9.50

* n = 9 (3 Replicates X 3 Locations) for each data point.

NURSCO 001 SPECIAL

A. GRAMA & C.F. KONZAK

SAMPLE NO.	SELECTION NO.	WHEAT				MABSC	MTPYE	BABS	BAKE		LVOL	CRUMB SCORE
		TYPE	FYELD	FPROT					M.T.			
1	V761-11-J1-B3-J4 <u>6/</u>	S	68.2	11.3	62.5	4M		57.0 x	2.1		91	2
2	V761-11-J2-B1-J3 <u>6/</u>	H	72.4	11.6	64.0	3M		60.0	2.0		90	2
3	V761-12-J4-B2-J2	H	72.7	12.8	65.0	2H x		60.0	1.8		80	3
4	V762-2-J1-B1-J2 <u>6/</u>	H	71.8	12.4	64.0	3M		60.5	2.3		91	2
5	V762-2-J1-B2-J1	H	69.9	12.9	65.5	2H x		60.5	2.0		102	2
6	V762-2-J1-B2-J5	H	69.4	12.7	64.5	2H x		60.5	1.9		94	1
7	V762-2-J1-B4-J2 <u>6/</u>	S	67.5	11.8	63.0	4M		60.5	2.9		95	2
8	V762-16-J2-B1-J3 <u>6/</u>	S	67.5	12.0	62.5	5H		58.0	3.5		99	2
9	V762-16-J2-B2-J3 <u>6/</u>	S	69.0	11.8	62.0	3H		57.0	3.5		95	2
10	V763-2-J1-B1-J4	H	66.9 x	12.8	63.0	4M		61.0	2.5		85	4
11	V763-2-J1-B3-J1	H	63.0 x	12.8	64.5	2H x		60.0	1.6		82	6
12	V763-2-J1-B3-J3	H	69.5	13.4	66.5	2H x		62.0	2.3		83	4
13	V763-3-J1-B2-J4 <u>6/</u>	H	69.4	12.8	67.0	5H		66.0	4.3		95	2
14	V763-16-J4-B1-J4	H	60.5 x	12.4	64.0	5H		65.0	4.5		98	2
15	V764-1-J3-B2-J3 <u>5/</u>	H	70.1	14.5	67.5	3H		63.0	2.5		90	2
16	V764-14-J2-B2-J2 <u>6/</u>	H	68.8	12.5	65.5	6H		61.5	5.9		88	2
17	V764-25-J5-B1-J3	H	66.7 x	12.8	66.5	7H		68.5	6.2		94	2
18	V764-25-J5-B2-J3 <u>6/</u>	H	68.6	12.1	67.0	7H		67.0	5.8		86	2
19	V878-C3-1-B1-J5-B3-J2	H	61.5 x	12.6	65.5	2H x		62.5	2.1		97	4
20	V879-B1-B2-J3	S	65.4 x	13.5	66.5	1H x		60.0	1.2		78	9
21	V879-B2-B2-J2	S	69.5	13.0	67.0	1H x		62.0	1.3		90	2
22	V879-B2-B12-J2 <u>5/</u>	H	73.3	14.4	67.5	3H		63.5	2.5		97	2
23	V879-B3-B1-J2	H	71.8	15.3	69.0	2H x		65.0	1.6		97	2
24	V879-B4-B2-J2	S	64.7 x	13.1	65.0	2H x		60.5	1.6		80	6

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

NURSCO 001 SPECIAL

A. GRAMA C.F. KONZAK

SAMPLE NO.	SELECTION NO.	WHEAT TYPE	FYELD	FPROT	MABSC	MTYPE	BABS	BAKE M.T.	LVOL	CRUMB SCORE
25	V880-D251-B2-B1-J1	S	62.2 x	12.7	65.0	2H x	61.0	1.2	78	5
26	V880-D265-B2-B1-J3	H	67.9	14.2	67.5	1H x	62.0	1.0	80	5
27	V880-D268-B1-B6-B1-J3	H	69.2	12.5	66.0	2H x	61.0	1.5	71	4
28	V880-D268-B1-B6-B1	H	66.5 x	11.8	64.5	2M x	65.0	2.0	75	2
29	V881-E1-B2-B-J5-J3	H	72.4	13.0	66.0	1H x	66.0	2.0	88	2
30	V881-E12-B2-J1-B2-J2	H	72.4	13.4	66.0	1H x	61.5	1.7	94	4
31	V881-E12-B2-J1-B2-J7	S	66.0 x	12.4	64.5	1H x	63.5	1.3	85	6
32	V881-E21-B3-J1-B1-J2	S	69.0	13.1	64.0	1H x	64.0	1.1	80	4
33	V881-E21-B3-J3-B1-J2	S	68.4	14.1	66.0	1H x	60.0	1.1	85	5
34	V881-E24-B1-B2-B1-J3	S	70.3	13.3	66.0	1H x	63.5	1.3	81	4
35	V881-E24-B1-B2-B2	S	70.7	12.6	65.0	1H x	64.0	1.5	85	4
36	V881-E24-B2-J3	S	70.7	13.2	65.5	1H x	64.0	1.1	85	4
37	V881-E51-B3-B1-B1-J1	S	68.4	12.5	64.5	1H x	58.0	1.3	85	8
38	V881-E57-B2-B3-B2-J3	S	70.1	12.9	65.0	1H x	58.0	1.3	95	2 open
39	V881-E57-B2-B3-B3-J1	S	69.5	12.6	65.0	1H x	64.0	1.5	86	3
40	V881-E59-B1-B1-B2-J3	H	69.5	13.4	67.5	1H x	64.0	1.3	84	2
41	V881-E66-B4-J2	H	70.1	13.5	67.0	2H x	62.0	2.3	89	2
42	V882-F17-B1-B1-B2-J2	H	70.7	12.9	67.0	2H x	67.0	2.1	84	2
43	V882-F22-B2-B3-B2-J2 <u>5/</u>	H	68.8	14.9	69.0	4H	69.0	2.9	97	2
44	V882-F22-B2-B3-B3-J1	H	64.7 x	13.7	68.0	3H	62.5	2.7	98	2
45	V882-F22-B2-B4-B1-J1 <u>5/</u>	H	72.2	14.3	68.5	3H	69.0	2.6	91	2
46	V882-F22-B2-B4-B2-J2 <u>5/</u>	H	68.6	14.4	69.0	4H	69.5	3.0	101	3 open
47	V882-F36-B1-B1-B2-J2 <u>5/</u>	H	71.4	14.2	69.0	4H	69.0	3.5	93	2
48	V882-F37-B1-B2-B2-J3 <u>5/</u>	S	64.5	13.8	66.5	4M	66.5	2.6	96	2
49	V882-F72-B2-B2-B3-J2 <u>6/</u>	S	63.9 x	12.2	66.0	4M	66.0	3.0	87	2
50	V882-F73-B4-B3-B5-J2 <u>6/</u>	H	70.7	13.1	67.0	4H	68.0	3.5	85	2
51	V882-F75-B1-B2-B3-J2	S	56.4 x	13.9	66.5	2H x	65.0	1.8	74	9

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 001 SPECIAL A. GRAMA & C.F. KONZAK

SAMPLE NO.	SELECTION NO.	WHEAT TYPE	FYELD	FPROT	MABSC	MTYPE	BABS	BAKE M.T.	LVOL	CRUMB SCORE
52	V883-G51-B2-B1-B2-J7 <u>5/</u>	H	72.5	14.1	68.5	4H	69.0	3.5	93	2
53	V883-G53-B2-B1-B2-J1	S	63.9 x	14.0	67.0	3M	68.0	2.1	100	4 open
54	V883-G53-B2-B1-B3-J2	S	63.5 x	13.5	66.5	3M	65.5	2.5	97	4 open
55	V883-G53-B2-B2-B1-J4	S	58.3 x	13.6	66.5	3H	64.5	2.5	102	3
56	V883-G62-B3-B1-B5-J3 <u>6/</u>	H	68.6	12.4	58.0	3H	66.0	2.8	90	2
57	Standard Cultivar Lachish	H	71.4	11.0	66.0	3M	63.0	2.3	75	6
58	New Release Cultivar V393-676 <u>6/</u>	H	70.5	12.0	67.0	5H	66.0	3.5	100	2
59	V762-10-J1-B1 <u>5/</u>	H	73.3	16.0	70.0	2H x	66.0	3.8	105	2 open
60	V764-12-J1 <u>6/</u>	S	68.6	12.9	68.0	4H	66.0	3.0	103	2
61	V761-9-J1-B2 <u>5/</u>	H	69.4	15.0	69.0	5H	69.5	4.5	108	2 open
62	V883-G62-B3-B1-B5 <u>5/</u>	H	70.1	13.8	68.5	3H	66.0	2.9	91	2
63	V761-9-J4-B2 <u>5/</u>	H	68.0	17.1	72.5	3H	68.0	3.5	107	2 open
64	V761-9-J1-B1 <u>5/</u>	H	65.6	15.9	72.5	6H	72.0	6.1	100	2 open
65	V882-F73-B4-B3-B5 <u>5/</u>	S	68.4	13.3	67.5	4H	64.5	2.9	96	2
66	V882-F17-B1-B2-J2 <u>5/</u>	H	71.4	12.1	68.5	4H	67.0	3.5	87	2
67	V882-F73-B4-B1-B2 <u>5/</u>	H	67.9	13.8	69.5	4H	65.0	2.9	91	2
68	V882-F72-B2-B2-B4 <u>6/</u>	S	65.0	13.4	67.0	3H	63.5	2.5	94	2
69	V763-14-J1-B4 <u>5/</u>	S	67.5	12.9	66.0	2H x	59.0	2.5	95	1
70	V882-F72-B2-B2-B1	S	63.7 x	14.0	66.0	2H x	61.0	2.0	100	2
71	V764-37-J2	S	58.1 x	14.3	71.0	4H	68.0	3.7	104	2

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

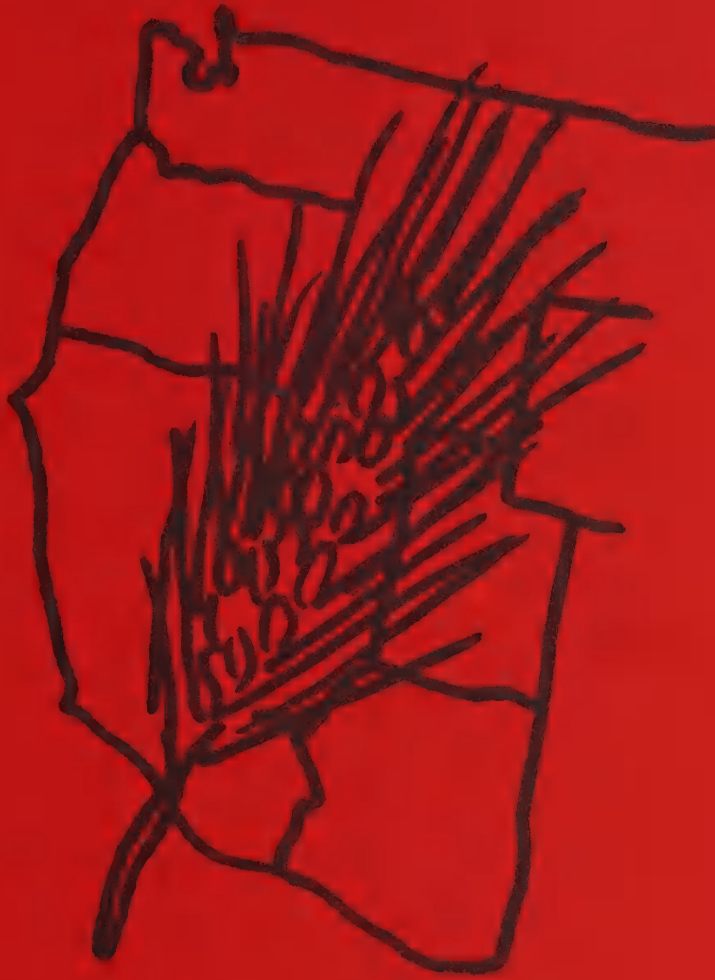
SAMPLE NO.	SELECTION NO.	WHEAT TYPE	FYELD	FPROT	MABSC	MTYPE	BABS	BAKE M.T.	LVOL	CRUMB SCORE
72	V766-7-J1-B2 5/	H	70.7	16.5	71.5	6H	70.0	4.8	108	2 open
73	V763-16-J4	H	64.7 x	17.0	75.0	3H	66.0	4.0	105	2 open
74	V883-G53-B2-B1-B1	S	65.0	12.2	64.5	2H x	59.5	1.5	76	6
75	V882-F73-B4-B3-B3 5/	H	73.7	15.6	71.0	4H	67.0	3.3	95	2
76	V761-9-J2-B1 6/	H	71.2	12.2	67.5	6H	65.0	6.0	90	2
77	V763-2-J2-B1	H	69.0	15.4	71.5	1H x	66.0	1.3	85	5
78	V882-F73-B4-B3-B2 6/	H	67.5	14.8	70.0	4H	64.0	3.0	98	2
79	V882-F73-B2-B1-B1 6/	S	65.4	12.7	64.5	4H	62.0	3.3	90	2
80	V761-9-J3-B1 5/	H	70.3	13.3	67.5	6H	65.0	4.5	93	1
81	V766-7-J2 5/	H	71.8	15.5	70.5	6H	68.0	5.0	110	2 open
82	V761-28-J4-B2 5/	H	68.4	16.8	73.5	5H	69.0	4.0	114	1
83	Wampum	H	75.2	11.1	65.5	3M	60.0	3.0	87	2

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

COMMENTS: All values are reported on an as is moisture basis (flours were 13.0-13.5% moisture). Wheat type (H= Hard and S= Soft) refer to endosperm texture as measured by NIR reflectance method. Loaf volumes are those for 10g micro bakes. The selections identified with footnotes have promising overall quality. Deficiencies of the other selections are noted by "x" in the table of data. It should be noted that all selections were assumed to be hard type wheats and were conditioned accordingly for milling, so those selections which were soft were over tempered by 1.5-2.0% which significantly effects flour yield; therefore, the milling data for those selections are not meaningful.

002 SPECIAL

TENTH ANNUAL REPORT - 1980 CROP



PACIFIC NORTHWEST GRAIN COUNCIL COLLABORATIVE TEST

October 1981

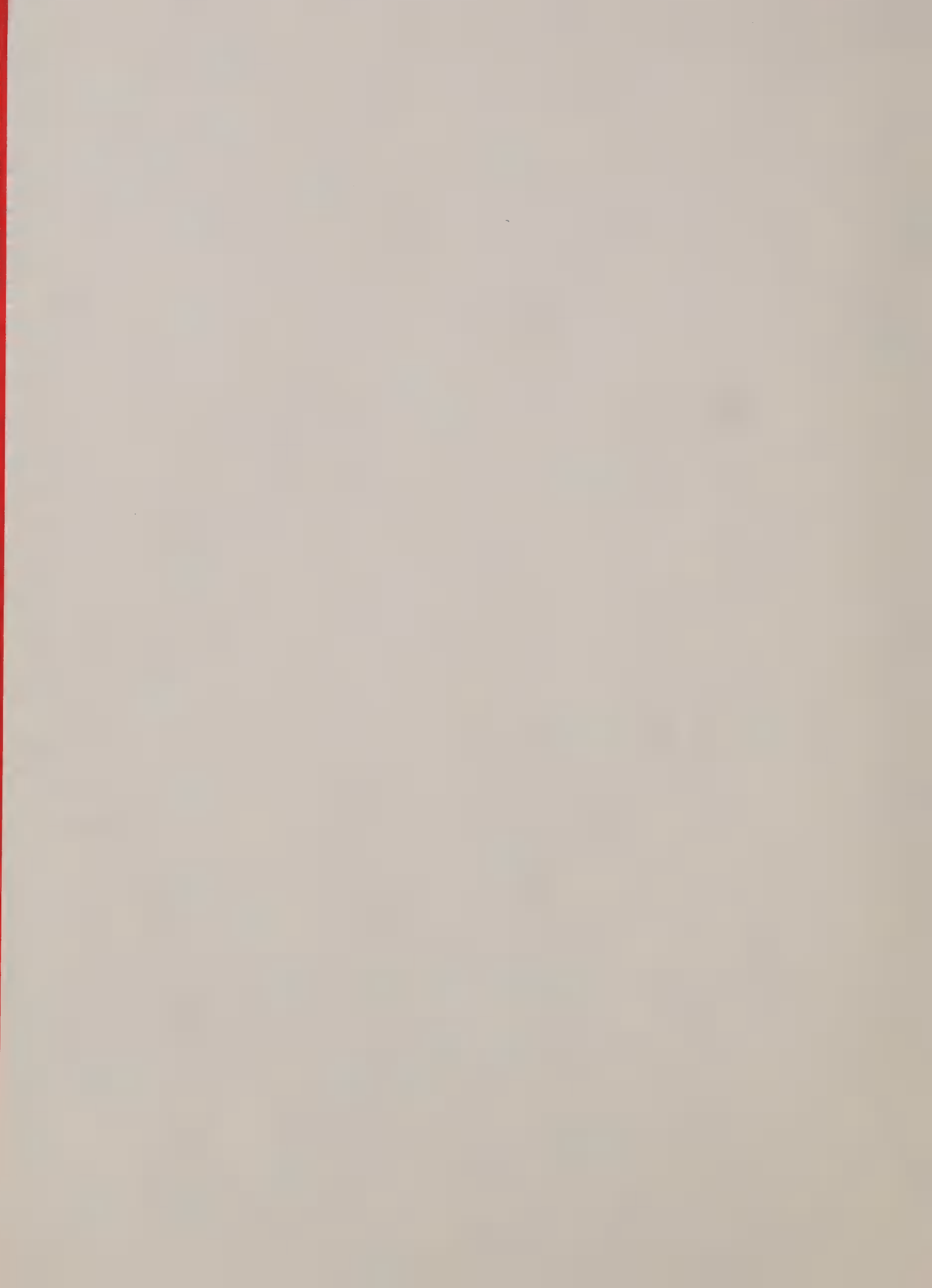
Distributive Report^{1/}

1/ Prepared by USDA,SEA Western Wheat Quality Laboratory, Pullman, Washington.

(These are the results of preliminary tests which are not to be used for for publication in any form without the consent of the Collaborative Committee.)

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OBJECTIVES AND INTRODUCTION

These collaborative flour tests are supported by the Pacific Northwest Crop Improvement Association in cooperation with the USDA, SEA, Western Wheat Quality Laboratory. The purpose is to maintain and improve the milling and baking quality of wheat in the Western Region. It is an attempt to keep current with the needs of wheat processors, both domestic and abroad. The information gained from the data of the domestic and foreign collaborators is of significant value to the wheat breeding programs of the region. The project hopefully provides each collaborator an opportunity to express his opinion as to whether or not the tested selections would satisfy the end-use demands of his industry.

The data and comments included in the individual reports provide the USDA, SEA, Western Wheat Quality Laboratory and plant breeders guidelines for use in the development of future wheat varieties that will best satisfy the needs of the industry.

ACKNOWLEDGMENTS

We would like to thank each of the Collaborators (listed on Page 2) for their participation in this annual project and also the U. S. Wheat Associates, U.S.A., Inc., for their assistance in arrangements with our valued foreign customers.

PNWCIA COLLABORATORS

Japanese Milling Association Committee ^{1/}	Tokyo, Japan
Dae Han Flour Mills Co., Ltd.	Inchon, Korea
Cheil Sugar Co., Ltd.	Seoul, Korea
Centennial Mills	Portland, Oregon
Fisher Flouring Mills	Seattle, Washington
General Mills, Inc.	Vallejo, California
Mother's Cake & Cookie Co.	Oakland, California
Nabisco, Co.	Fairlawn, N.J.
Cereal Quality Laboratory	Bozeman, Montana
Idaho Wheat Quality Laboratory	Aberdeen, Idaho
Kerr Pacific Milling Corp.	Pendleton, Oregon
Continental Mills, Inc.	Seattle, Washington
Western Wheat Quality Laboratory	Pullman, Washington

^{1/} Cooperative work by technical members from 4 major flour milling companies in Japan (Nisshin Flour Milling Co., Nippon Flour Mills Co., Showa Sangyo Co., and Nitto Flour Milling Co.) and Japanese Wheat Flour Institute.

1980

VARIETIES & SELECTIONS

<u>Sample No.</u>	<u>Selection</u>	<u>Breeder</u>	<u>Location</u>	<u>Class</u>	<u>Flour 1/ Protein</u>
42	Nugaines CI013968	Check	--	SWW	8.8
43	77 - 294	G.W. Bruehl	Pullman, WA	SWW	8.7
44	ID 5318	W.K. Pope	Pullman, WA	SWW	9.1
45	WA 6363	C.J. Peterson	Pullman, WA	SWW	7.2
46	Paha CI014485	Check	--	Club	8.1
47	Jacmar WA 06585	R.E. Allan	Lind, WA	Club	8.9
48	WA 6472	R.E. Allan	Lind, WA	Club	8.4
49	Fielder CI017268	Check	--	SWS	9.7
50	WA 6402	C.F. Konzak	Pullman, WA	SWS	10.7
51	ID 185	D.W. Sunderman	Pullman, WA	SWS	10.1
52	Borah CI017267	Check	--	HRS	13.1
53	ID 167	D.W. Sunderman	Lind, WA	HRS	13.2
54	WA 6510	C.F. Konzak	Lind, WA	HRS	11.5
55	WA 6750	C.F. Konzak	Lind, WA	HRS	11.2

1980

VARIETIES & SELECTIONS (CONTD)

<u>Sample No.</u>	<u>Selection</u>	<u>Breeder</u>	<u>Location</u>	<u>Class</u>	<u>Flour 1/ Protein</u>
56	Wanser CI013844	Check	--	HRW	10.7
57	77 - 99	G.W. Bruehl	Pullman, WA	HRW	11.6
58	Dirkwin CI017745	Check	--	SWS	9.5
59	WA 6753	C.F. Konzak	Royal Slope, WA Lind, WA	SWS	10.3

1/ 14% Moisture Basis.

BREEDERS REPORT

77-294

1. Wheat Type: Common soft white
2. Background:
 - A. Origin - WSU, USDA
 - B. Derivation - Unknown club/Sprague
 - C. Contribution - Snow mold resistance
 - D. Years in Tests - Four (4)
3. Agronomic Comparisions:
 - A. Yield - Similar to Sprague
 - B. Test Weight - Tends to be low
 - C. Maturity - Medium
 - D. Lodging - Severe under high fertility, better than Sprague under intermediate conditions.
 - E. Awn Type - Awned
4. Disease and Insect Rating:
 - A. Stem Rust - Susceptible
 - B. Leaf Rust - Susceptible
 - C. Stripe Rust - Moderately susceptible
 - D. Dwarf Bunt - Susceptible
 - E. Common Bunt - Moderately susceptible
 - F. Flage Smut - Susceptible
 - G. Foot Rot - Susceptible

BREEDERS REPORT

WA 6363

1. Wheat Type: Soft White Winter
2. Background:
 - A. Origin - USDA,WSU
 - B. Derivation - Luke/WA 5829 (WA 5829 = Sup. Helvia/Suwon 92/CI136215).
 - C. Contribution - High Yield, diseases resistant, good quality.
 - D. Years in Tests - Five (5)
3. Agronomic Comparisons:
 - A. Yield - 7% better than Luke and the same as Daws in 85 tests in the PNW.
 - B. Test Weight - Same as Luke (60.0 lb.) under high fertility.
 - C. Maturity - 4-7 days later than Nugaines.
 - D. Lodging - Slightly better than Luke but weaker than Nugaines.
 - E. Awn Type - Awned, white chaff.
4. Disease and Insect Rating:
 - A. Stem Rust -
 - B. Leaf Rust - Similar to Luke - moderately susceptible.
 - C. Stripe Rust - Similar to Luke - moderately susceptible.
 - D. Dwarf Bunt - Resistant
 - E. Common Bunt - Resistant
 - F. Flat Smut - Susceptible
 - G. Foot Rot - Similar to Luke - moderately susceptible.

BREEDERS REPORT

WA 6472

1. Wheat Type: Club, soft white winter, semidwarf
2. Background:
 - A. Origin - A blend of ten stripe rust resistant components
 - B. Derivation - Components developed by backcrossing
 - C. Contribution - Foliar disease resistance, yield increase, higher test weight
 - D. Years in Tests - 4 years
3. Agronomic Comparisons:
 - A. Yield - Equal to Faro, Barbee, Nugaines, < Tyee, Daws
 - B. Test Weight - > Barbee, Tyee, Faro
 - C. Maturity - like Paha
 - D. Lodging - < Paha
 - E. Awn Type - awnletted
4. Disease and Insect Rating:
 - A. Stem Rust - VS
 - B. Leaf Rust - Heterogeneous, R/m/s
 - C. Stripe Rust - MS
 - D. Dwarf Bunt - MS
 - E. Common Bunt - MR - resistance from Bt₁ and Bt₄
 - F. Flag Smut - S
 - G. Foot Rot - MS

BREEDERS REPORT

WA 6402

1. Wheat Type: Soft White Spring
2. Background:
 - A. Origin - Washington State University
 - B. Derivation - CI 14482/K6202578R21
 - C. Contribution - Best combination of disease resistance, processing quality and yield performance available.
 - D. Years in Tests - 4
3. Agronomic Comparisions:
 - A. Yield - Equal to Dirkwin, possibly superior to Urquie equal to Owens.
 - B. Test Weight - Superior to Dirkwin, slightly lower (1/2 lb.) than Fielder or Urquie.
 - C. Maturity - Approximately same as Fielder, earlier than Urquie.
 - D. Lodging - Good Res.
 - E. Awn Type - Awned
4. Disease and Insect Rating:
 - A. Stem Rust - ?
 - B. Leaf Rust - Adult resistance to local races
 - C. Stripe Rust - Adult resistance to local races
 - D. Dwarf Bunt -
 - E. Common Bunt -
 - F. Flag Smut -
 - G. Foot Rot -

BREEDERS REPORT

ID 185

1. Wheat Type: Soft White Spring
2. Background:
 - A. Origin - ID0045/6/2*A6514S-A-102-1/5/2*A6535S-443-101/3/A63166S-A-4-27-1-2//
PI 227196/A63166S-A-2-8/4/Gns/Lmh 53
 - B. Derivation - Derived from bulk of F_4 line
 - C. Contribution - Stripe rust resistant; moderately resistant to leaf rust
 - D. Years in Tests - 4 years in Idaho, 2 years in Regional
3. Agronomic Comparisions:
 - A. Yield - 3 bu better than Fieldwin in 3 years-2 station irrigated avg in Idaho
 - B. Test Weight - 1 pound lower than Fieldwin
 - C. Maturity - 2 days earlier than Fieldwin
 - D. Lodging - Slightly weaker straw than Fieldwin, equal to Twin
 - E. Awn Type - Awned, white glumed
4. Disease and Insect Rating:
 - A. Stem Rust - S
 - B. Leaf Rust - MR to western races
 - C. Stripe Rust - R to 1980 races; MS to S to 1979 Mt. Vernon races
 - D. Dwarf Bunt - S
 - E. Common Bunt - S
 - F. Flag Smut - ?
 - G. Foot Rot - ?

BREEDERS REPORT

ID 167

1. Wheat Type: Hard Red Spring
2. Background:
 - A. Origin - Moran/Tobari 66/3/Tzpp/AN3//B61-136 Ab. Sel. 1
 - B. Derivation - Derived from bulk of F₃ line
 - C. Contribution - High yield; good protein quality; rust resistance
 - D. Years in Tests - 4 in Idaho; 2 in regional
3. Agronomic Comparisions:
 - A. Yield - Average 3 years, 2 irrigated stations; yield-Borah 78.8 ; McKay 86.9
 - B. Test Weight - Borah 59.2; McKay 59.2
 - C. Maturity - 3 days later than Borah
 - D. Lodging - Better than Borah
 - E. Awn Type - Awned, white glumed
4. Disease and Insect Rating:
 - A. Stem Rust - MR
 - B. Leaf Rust - MR to western races
 - C. Stripe Rust - R to races in 1980, MS to S to Mt. Vernon races in 1979.
 - D. Dwarf Bunt - S
 - E. Common Bunt - S
 - F. Flag Smut - ?
 - G. Foot Rot - ?

BREEDERS REPORT

WA 6510

1. Wheat Type: Hard Red Spring
2. Background:
 - A. Origin - Washington State University
 - B. Derivation - K6901495/MN26268
 - C. Contribution - Different disease resistance base, good processing quality competitive yield to Wampum, shorter straw than Wampum
 - D. Years in Tests - 3 years Western Regional
4-5 years WA State Nursery
3. Agronomic Comparisions:
 - A. Yield - Approximately equal to Wampum
 - B. Test Weight - Approximately equal to Wampum
 - C. Maturity - Midseason
 - D. Lodging - Good resistance
 - E. Awn Type - Awned
4. Disease and Insect Rating:
 - A. Stem Rust - S
 - B. Leaf Rust - Resistent to local races
 - C. Stripe Rust - Resistent to local races
 - D. Dwarf Bunt -
 - E. Common Bunt -
 - F. Flag Smut -
 - G. Foot Rot -

BREEDERS REPORT

WA 6750

1. Wheat Type: Hard Red Spring
2. Background:
 - A. Origin - Washington State University
 - B. Derivation - K71051/WA5949
 - C. Contribution - Different genetic base of disease resistance, good processing qualities
 - D. Years in Tests - 2 years - Western Regional Nursery
3 years - Washington State Nurseries
3. Agronomic Comparisions:
 - A. Yield - Similar to Wampum
 - B. Test Weight - Similar to Wampum
 - C. Maturity - Midseason
 - D. Lodging - Good resistance
 - E. Awn Type - Awned
4. Disease and Insect Rating:
 - A. Stem Rust - ? Probably S
 - B. Leaf Rust - Resistance to local races
 - C. Stripe Rust - Resistance to local races
 - D. Dwarf Bunt - Not important
 - E. Common Bunt - " "
 - F. Flag Smut - " "
 - G. Foot Rot - " "
 - H. Hessian fly Probably S.

BREEDERS REPORT

77-99

1. Wheat Type: Hard red winter
2. Background:
 - A. Origin - WSU, USDA
 - B. Derivation - 127/236//236-7/Sturdy
 - C. Contribution - Snow mold resistance
 - D. Years in Tests - Three (3)
3. Agronomic Comparisions:
 - A. Yield - Comparable to McCall
 - B. Test Weight - Satisfactory
 - C. Maturity - Early
 - D. Lodging - Strong Straw
 - E. Awn Type - Awned
4. Disease and Insect Rating:
 - A. Stem Rust - ?
 - B. Leaf Rust - Susceptible
 - C. Stripe Rust - Moderately susceptible
 - D. Dwarf Bunt - Moderately resistant
 - E. Common Bunt - Resistant
 - F. Flag Smut - Resistant
 - G. Foot Rot - Susceptible

BREEDERS REPORT

WA 6753

1. Wheat Type: Soft White Spring
2. Background:
 - A. Origin - Washington State University
 - B. Derivation - N7000315/ID 65
 - C. Contribution - Disease resistance, yield equal to best SWS.
 - D. Years in Tests - 3 years Western Regional Nursery
3. Agronomic Comparisions:
 - A. Yield - Yield equal to slightly superior to Fielder, Urquie in absence of rusts.
 - B. Test Weight - Equal to Fielder and Urquie, superior to WA6402 and Dirkwin.
 - C. Maturity - Between Fielder and Urquie, Day sensitive.
 - D. Lodging - Resistance similar to Fielder
 - E. Awn Type - Awned
4. Disease and Insect Rating:
 - A. Stem Rust - Stem rust unknown
 - B. Leaf Rust - Adult plant resistant to local races.
 - C. Stripe Rust - Adult plant resistant to local races.
 - D. Dwarf Bunt - ?
 - E. Common Bunt -
 - F. Flag Smut -
 - G. Foot Rot -
 - H. Hessian Fly - Susceptible

Wheat Cleaning and Milling Procedure for the Miag Multomat Mill

When wheat arrives, it is stored in 5-bu. steel bins as cleaned. The cleaning process consists of using a Clipper cleaner followed by a Carter Disc Separator and a Forester Grain Scourer.

To condition the wheat for milling, the proper temper or moisture level is attained by the addition of water. A mixer having a 3-bu. capacity is used for this operation. The first temper (13.5 - 14.5% moisture for soft wheat and 15.5 - 16.5% moisture for hard wheat) is added 18 to 24 hours before the milling process. Fifteen to twenty minutes prior to milling, the wheat is given a second temper by the addition of 0.5% water based on wheat weight.

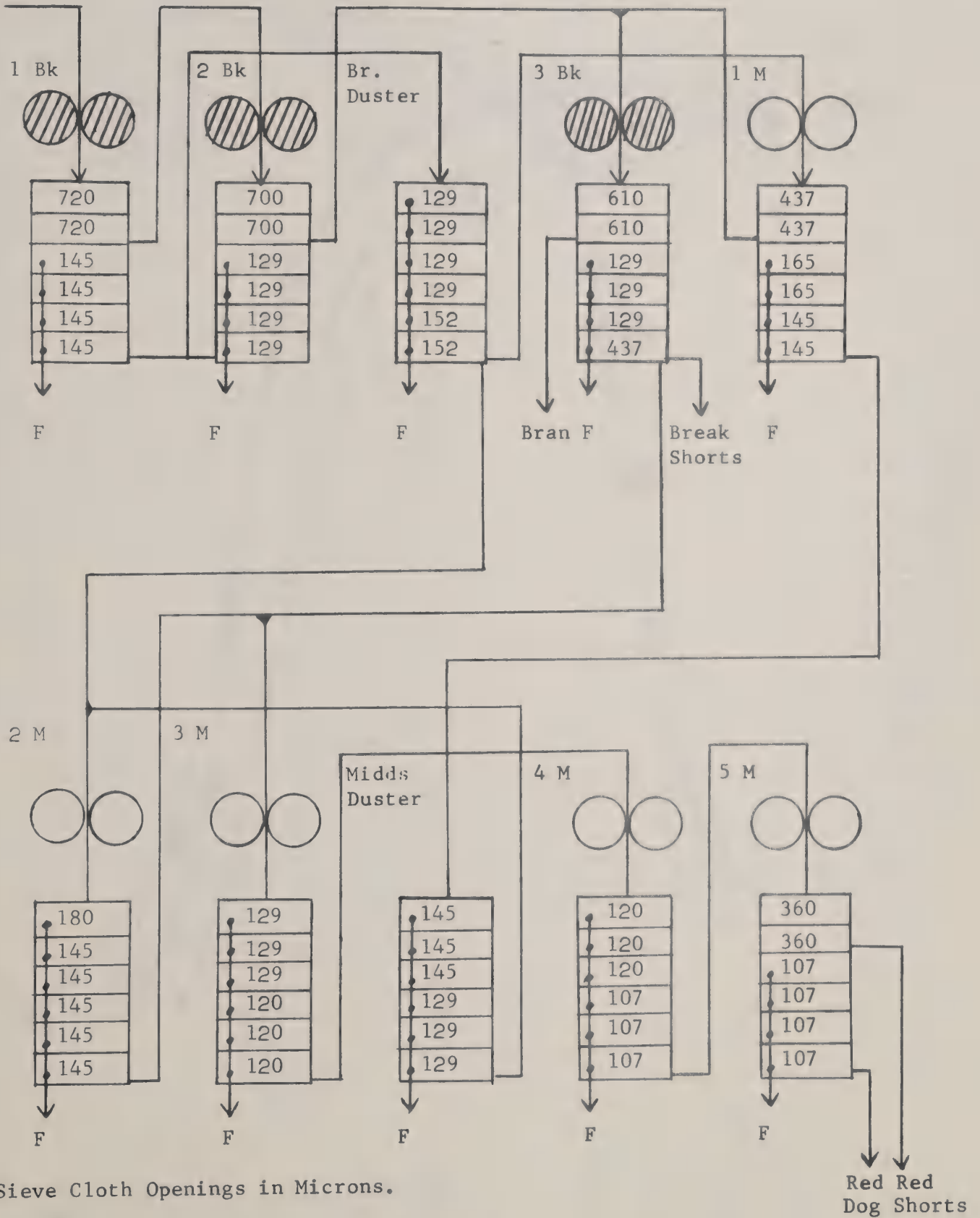
Approximately 120-pound sub-samples of each variety are tempered for milling. The feed rate is adjusted to give the proper load to the mill. Soft common wheats are milled at a rate of 800-900 gms/min., white club wheats at 900-1000 gms/min., and hard wheats at a rate of 850-950 gms/min.

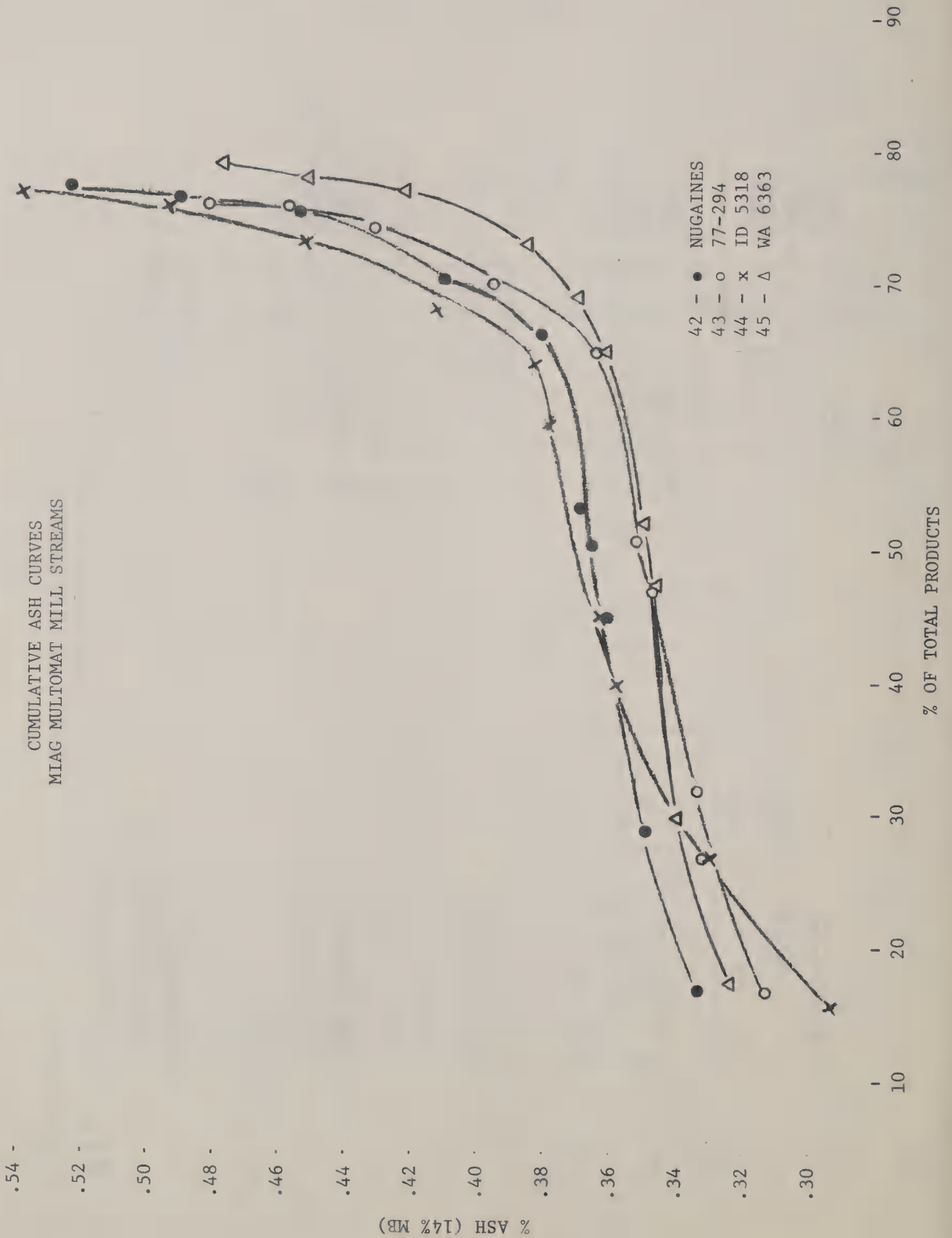
Adjustment of the break rolls is done by setting the rolls to give a uniform break release from sample to sample. The 1st break roll is adjusted so that about 43% of the stream passes through a No. 24 Tyler (707 micron) wire screen in one minute of sifting. The 2nd break roll is adjusted so that about 64% of the screen passes through the No. 24 Tyler wire screen in one minute. The 3rd break roll is adjusted to clean the bran as completely as possible without excessive shattering. The adjustment for reduction rolls is done by observation of stock with the objective of grinding and making as much flour possible at each pass but not to the point of overgrinding and flaking the stock.

Each of the flour streams are sampled, weighed, and analyzed for moisture and ash. Cumulative ash curves are plotted for each sample milled. The ten flour streams are blended together using a horizontal ribbon blender to give a straight grade flour which is used for baking, analytical and physical-dough testing.

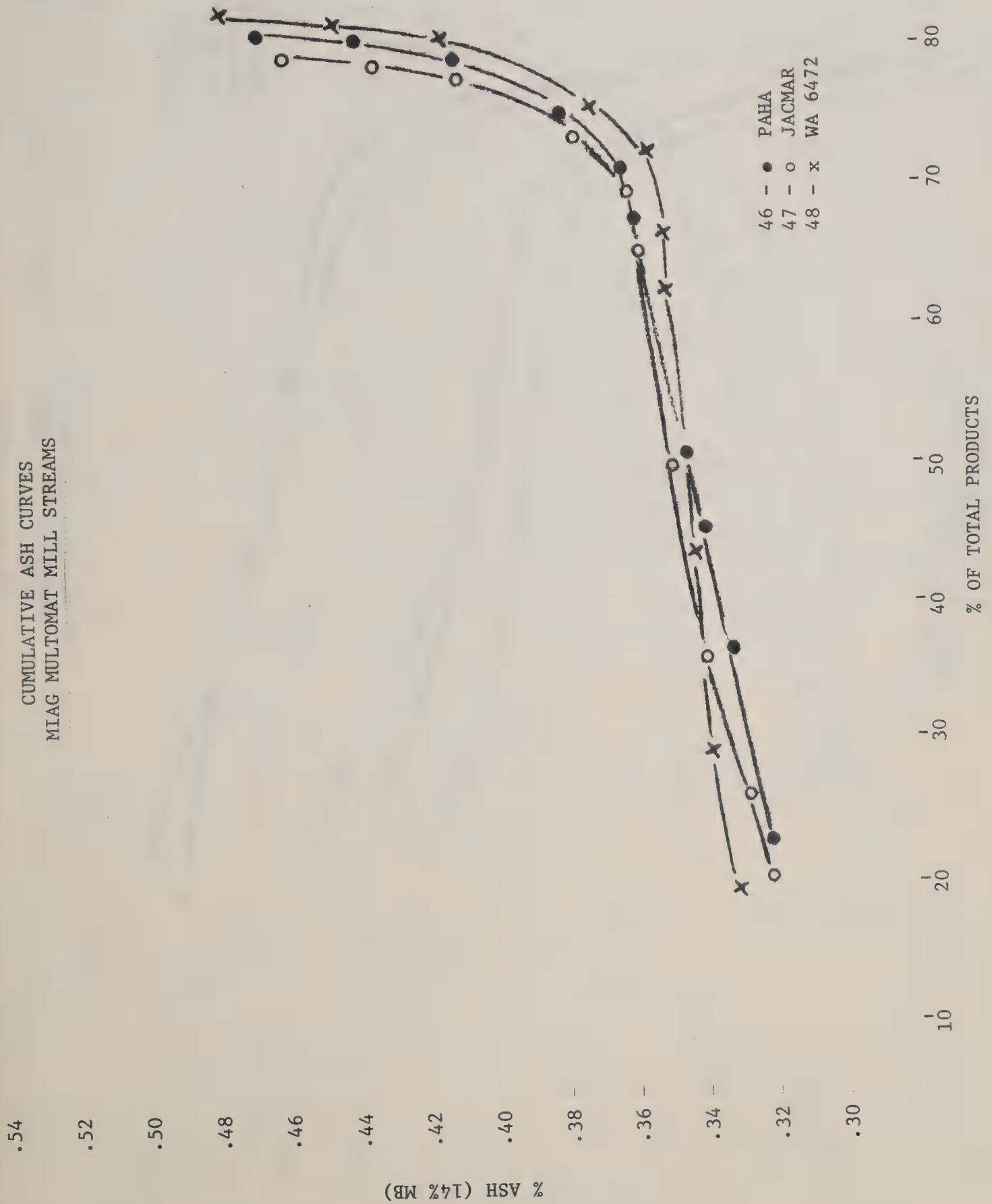
The schematic flow sheet of the mill, showing rolls and flour screens used is on Page 6. Stream samples were collected and flour ash determined to develop ash curves shown on Pages 7, 8, and 9.

FLOW SHEET WWQL MIAG MULTOMAT

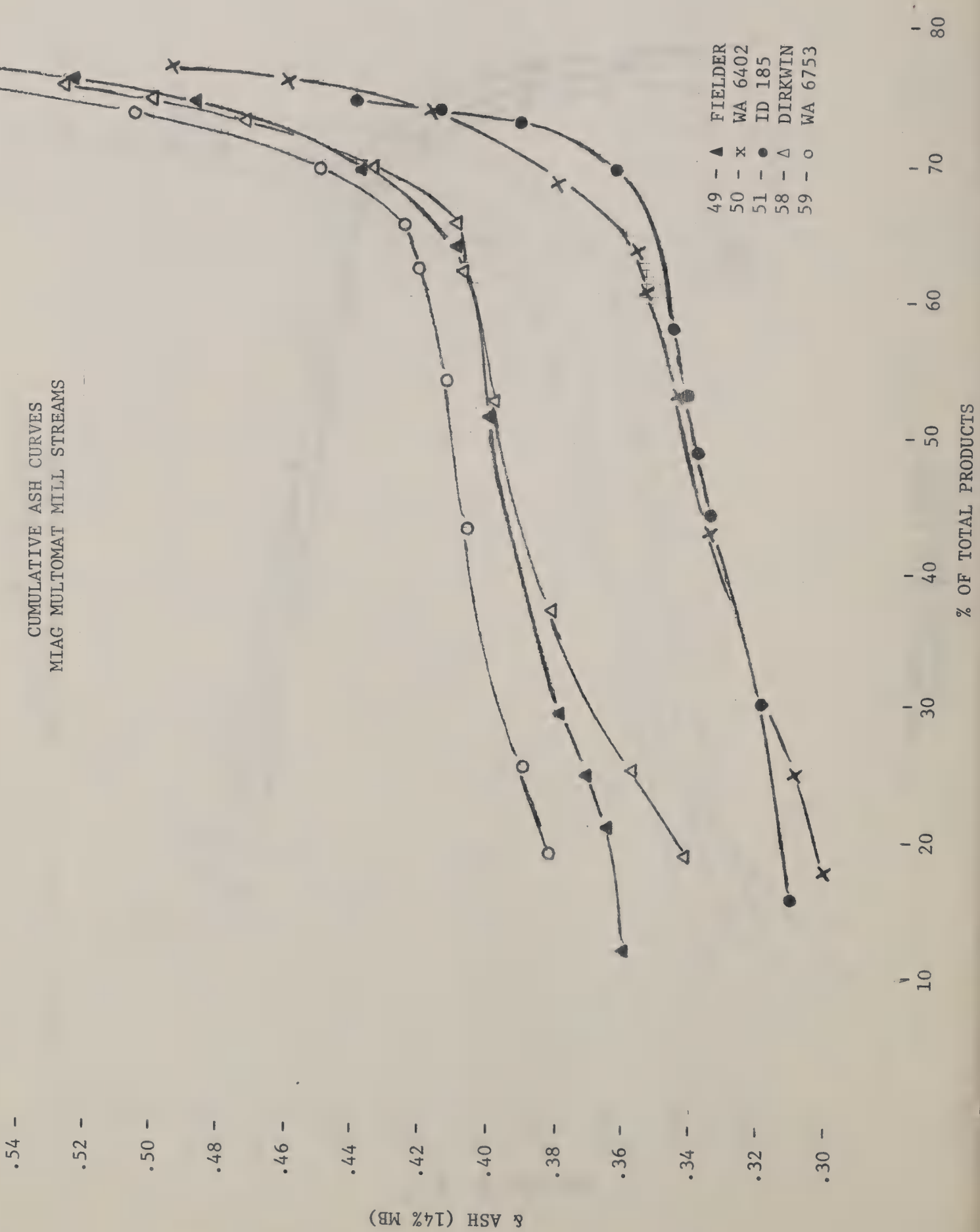
Tempered
Wheat



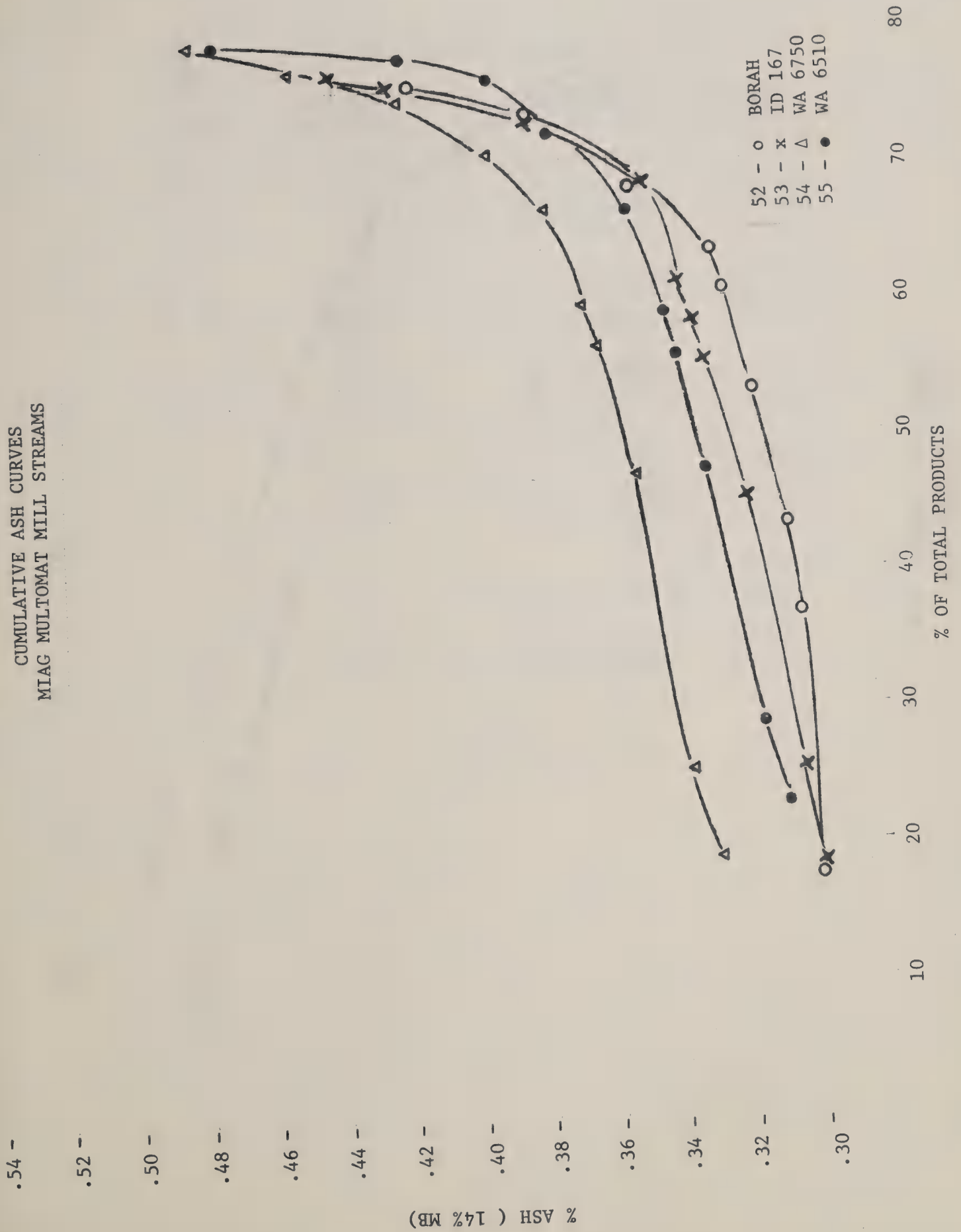
CUMULATIVE ASH CURVES
MIAG MULTOMAT MILL STREAMS



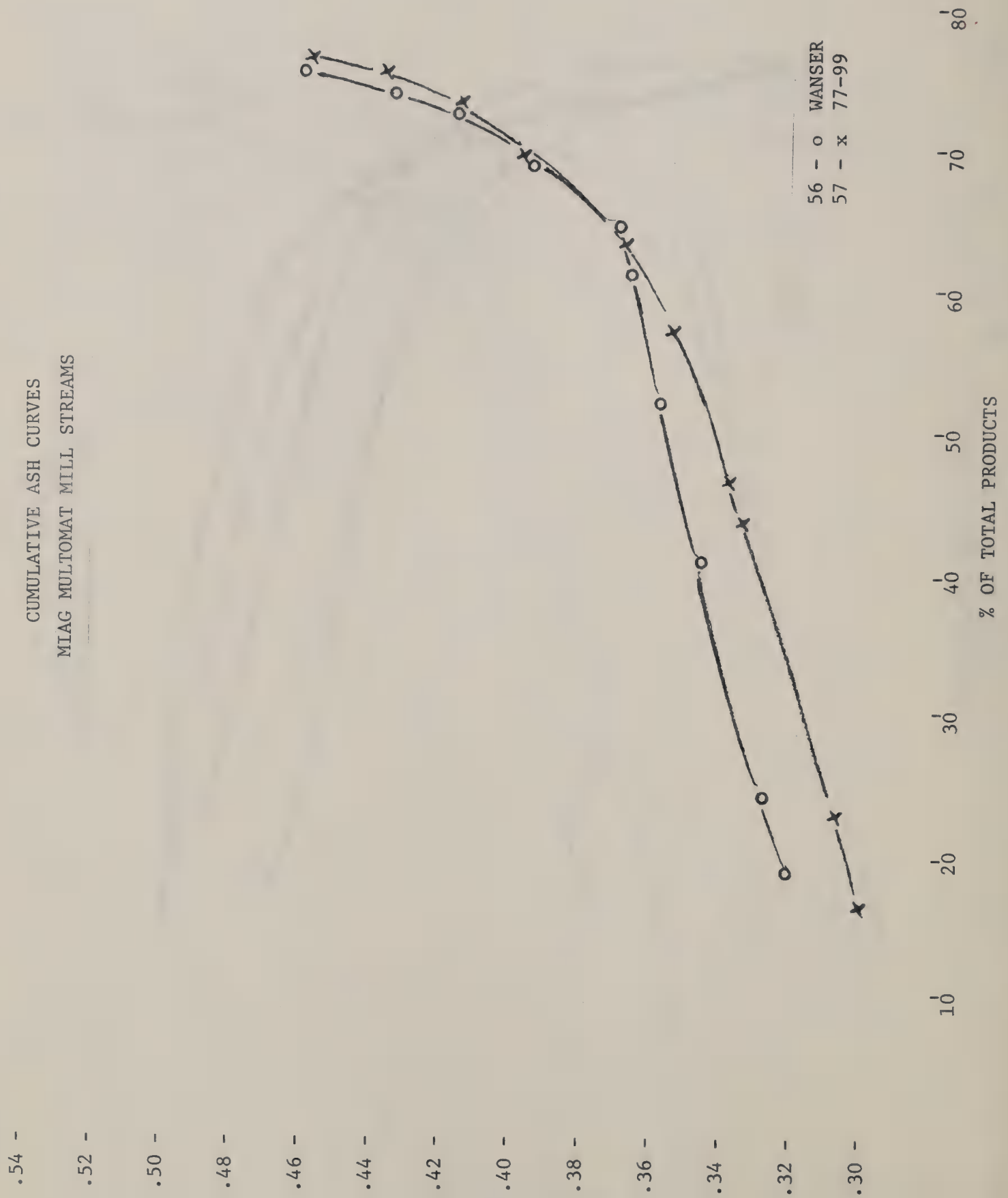
CUMULATIVE ASH CURVES
MIAG MULTOMAT MILL STREAMS



CUMULATIVE ASH CURVES
MIAG MULTOMAT MILL STREAMS



CUMULATIVE ASH CURVES
MIAG MULTOMAT MILL STREAMS



FLOUR MILLING SUMMARY

<u>Sample No.</u>	<u>Selection No. or Variety</u>	<u>FLOUR ASH AND EXTRACTION</u>		
		<u>50%</u>	<u>90% Patent</u>	<u>St. Grade</u>
42	Nugaines	.362	.394(69.5)	.521(77.2)
43	77-294	.350	.388(68.7)	.480(76.4)
44	ID 5318	.369	.418(69.3)	.536(77.0)
45	WA 6363	.346	.378(71.5)	.476(79.4)
46	Paha	.343	.366(73.3)	.464(81.4)
47	Jacmar	.347	.364(71.8)	.457(79.8)
48	WA 6472	.343	.363(74.8)	.474(83.2)
49	Fielder	.400	.442(69.6)	.850(77.3)
50	WA 6402	.343	.395(69.4)	.495(77.1)
51	ID 185	.340	.356(67.5)	.710(75.0)
52	Borah	.316	.355(67.6)	.418(75.1)
53	ID 167	.325	.350(68.3)	.442(75.9)
54	WA 6510	.357	.398(70.6)	.482(78.5)
55	WA 6750	.335	.368(70.7)	.475(78.6)
56	Wanser	.356	.388(68.2)	.458(75.8)
57	77-99	.342	.395(69.2)	.456(76.9)
58	Dirkwin	.377	.425(68.2)	.524(75.7)
59	WA 6753	.431	.458(69.8)	.571(77.5)

Collaborator No. _____

PACIFIC NORTHWEST CROP IMPROVEMENT ASSOCIATION

BREAD BAKING METHOD AND MIXING TOLERANCE

COLLABORATIVE REPORT

Baking Method

Straight Dough	_____
Sponge Dough	_____
Grain Research Laboratory	_____
Other Method	_____
(Describe very briefly)	

Mixing Tolerance Based on:

Estimates	_____
Series of Bakes	_____
Mixing Curves	_____
Farinograph Curves	_____

COLLABORATIVE NO. _____

PACIFIC NORTHWEST CROP IMPROVEMENT ASSOCIATION

SOFT WHEAT FLOUR QUALITY COLLABORATIVE REPORT

Sample code # or variety _____ Date sample Received _____

Market Class _____ Tested _____

Flour Characteristics	Rating ^{2/}	Flour Characteristics	Rating ^{2/}
Protein _____ % ^{1/}	_____	Viscosity _____ °Mac	_____
Ash _____ % ^{1/}	_____	Sedimentation _____ ml	_____
Moisture _____ %	_____	Cookie Diameter _____ cm	_____
Farinograph or Mixograph		Spread Factor _____ %	_____
Absorption _____ % ^{1/}	_____	Falling Number _____ sec.	_____
Peak _____ % min.	_____	Max. amyl. vis. ^{3/} _____ B.U.	_____
Stability _____ % min.	_____		
Area under the Curve _____ % cm ²	_____		

^{1/} Corrected to 14% Moisture Basis.^{2/} Rating by the number system outlined in instructions.^{3/} Maximum amylograph viscosity.

PACIFIC NORTHWEST CROP IMPROVEMENT ASSOCIATION

HARD WHEAT FLOUR QUALITY COLLABORATIVE REPORT

Sample code # or variety _____

Date sample:
Received _____

Market Class _____

Tested _____

Flour Characteristics	Rating <u>2</u> /	Flour Characteristic	Rating <u>2</u> /
-----------------------	-------------------	----------------------	-------------------

Protein _____ % 1/ _____

Bread baking

Ash _____ % 1/ _____Absorption _____ % 1/ _____

Moisture _____ % _____

Mixing time _____ min 3/ _____

Farinograph or Mixograph

Fixed _____

Absorption _____ % 1/ _____

Optimum _____

Peak _____ min _____

Under mixed _____

Stability _____ min _____

Mixing Tolerance _____

Valorimeter _____ B.U. _____

Dough Handling _____

Bread quality

Oxidation requirement _____ mg _____

Proof time 4/ _____ min _____

Volume _____ c.c. _____

Bromate response _____ cm³ _____

Crumb color _____

Grain & Texture _____

Give an overall judgement of this sample using the rating 2/ system.
Add any comments regarding this sample that are pertinent.

- 1/ Corrected to 14% moisture basis.
- 2/ Rating by the number system outlined in instructions.
- 3/ Indicate if the mixing time used was fixed or optimum.
If fixed time was used indicate if the dough was over or under mixed.
- 4/ If proofing was to constant height rate proof time by the number system.

INDIVIDUAL COLLABORATORS' RATING
(SWW)

Code and Sample No.	Collab. No.	Flr. Prot.	Flr. Ash	Flr. Moist.	Farinograph Abs. Peak Stab.	Mac. Visc. Dia.	Cookie Spread Factor	Pancake Noodle	Udon	Sponge Cake	Overall Rating	Overall Baking ₁ / Rating
#42 Nugaines	-	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	5.00
Mean(\bar{x})												
#43 77 -294	1	5	7	5	5	5	3	5	5	5	5	
	2	-	-	-	-	-	-	-	-	-	-	
	3	5	7	4	-	-	-	-	-	-	-	
	4	-	-	-	-	-	-	-	-	-	-	
	5	5	6	6	4	5	5	-	-	-	-	
	6	5	6	5	-	-	-	5	-	-	-	
	7	5	6	5	6	5	4	4	-	-	-	
	8	5	6	5	-	-	-	5	-	-	-	
	9	5	6	5	5	4	3	5	-	-	-	
	10	5	7	5	5	6	5	5	-	-	-	
	11	-	-	-	-	-	3	5	-	4*	-	
	12	-	-	-	-	-	-	-	-	-	-	
	13	5	6.5	5	5	-	4	5	5	3.5	4	
Mean(\bar{x})												(4.39)
#44 ID 5318	1	5	5	5	5	5	-	5	6	4	5	
	2	-	-	-	-	-	-	-	-	-	-	
	3	3	5	5	-	-	-	-	-	-	-	
	4	-	-	-	-	-	-	-	-	-	-	
	5	5	5	6	4	4	5	-	-	-	-	
	6	5	5	5	-	-	-	4	-	-	-	
	7	4	5	5	6	4	3	4	-	-	-	
	8	5	5	4	-	-	-	3	-	-	-	
	9	5	5	5	5	4	4	5	-	-	-	
	10	4	5	5	6	4	4	4	-	-	-	
	11	-	-	-	-	-	3	5	-	4*	-	
	12	-	-	-	-	-	-	-	-	-	-	
	13	4.8	5	5	5	4.3	4	5	2	3	4	
Mean(\bar{x})												(4.28)
#45 WA 6363	1	3	7	5	3	5	-	7	7	5	6	
	2	-	-	-	-	-	-	-	-	-	-	
	3	9	7	5	-	-	-	-	-	-	-	
	4	-	-	-	-	-	-	-	-	-	-	
	5	6	6	7	4	5	4	-	-	-	-	
	6	6	6	5	-	-	-	6	-	-	-	
	7	8	7	5	3	5	8	5	-	-	-	
	8	6	6	3	-	-	-	9	-	-	-	
	9	5	6	5	4	5	4	7	6	-	-	
	10	4	7	4	3	3	6	8	-	-	-	
	11	-	-	-	-	-	6	6	-	5*	-	
	12	-	-	-	-	-	-	-	-	-	-	
	13	3.5	6	5	5.5	5	5	5.5	6	5	5	
Mean(\bar{x})												(5.41)

1/ Average Water Absorption, Viscosity, Cookie Diameter, Pancake, Udon Noodle, and Sponge Cake.

* High Ratio White Layer

Code and Sample No.	Collab. No.	Flr. Prot.	Flr. Ash	Flr. Moist.	Farinograph Abs. Peak	Stab. Val.	Mac. Visc.	Cookie Dia.	Spread Factor	Pancake Noodles	Sponge Cake	Overall Rating	Overall Baking Rating _{2/}
#46 Paha	-	-	-	-	-	-	CHECK	SAMPLE	-	-	-	-	5.00
	Mean(\bar{x})												
#47 Jacmar WA 06585	1	6	5	5	5	5	-	5	6	-	5	4.5	
	2	-	-	-	-	-	-	4	4	-	-	-	
	3	7	4	5	3	6	-	-	-	-	-	-	
	4	-	-	-	-	-	-	-	-	-	-	-	
	5	4	5	5	5	4	4	-	-	-	-	-	
	6	4	5	5	-	-	-	5	-	-	-	-	
	7	3	5	5	5	5	4	5	5	-	-	-	
	8	-	-	-	-	-	-	-	-	-	-	-	
	9	4	5	5	5	5	4	6	5	-	-	-	
	10	3	4	5	5	6	4	4	3	-	-	-	
	11	-	-	-	-	-	4	5	5	-	5*	-	
	12	-	-	-	-	-	-	-	-	-	-	-	
	13	4	5	5	5	-	4.5	6	-	4.5	-	-	
	Mean(\bar{x})				(4.71)		(4.08)	(5.00)		(5.00)	(4.50)	4.8	(4.71)
#48 WA 6472	1	5	6	5	5	5	-	5	5	-	5	5	
	2	-	-	-	-	-	-	6	6	-	-	-	
	3	6	9	4	4	5	-	-	-	-	-	-	
	4	-	-	-	-	-	-	-	-	-	-	-	
	5	5	6	5	5	5	3	-	-	-	-	-	
	6	5	6	5	-	-	-	5	-	-	-	-	
	7	5	6	5	5	5	5	5	5	-	-	-	
	8	-	-	-	-	-	-	-	-	-	-	-	
	9	5	6	5	5	5	4	5	5	-	-	-	
	10	5	7	5	5	5	5	4	4	-	-	-	
	11	-	-	-	-	-	5	4	3	-	3*	-	
	12	-	-	-	-	-	-	-	-	-	-	-	
	13	5	5	5	5	-	4.5	5	3	5.5	5.5	5	
	Mean(\bar{x})				(4.85)		(4.41)	(4.87)		(4.25)	(5.00)	(4.50)	(4.64)

2/ Average Water Absorption, Viscosity, Cookie Diameter, and Japanese Sponge Cake.

*** High Ratio White Layer**

INDIVIDUAL COLLABORATORS' RATING
(SWS)

Code and Sample No.	Collab. No.	Flr. Prot.	Flr. Ash	Flr. Moist.	Abs.	Farinograph Peak Stab.	Mac. Visc.	Cookie Spread Dia.	Pancake Factor	Udon Noodle	Sponge Cake	Overall Rating	Overall Baking Rating ^{1/}
#49 Fielder CI017268	-	-	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	5.00
Mean(\bar{x})													
#50 WA 6402	1	7	5	5	6	5	6	-	5	5	3	5	4
	2	-	-	-	-	-	-	-	-	-	-	-	-
	3	7	6	6	7	-	7	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-
	5	4	5	6	5	4	4	-	-	-	-	-	-
	6	3	5	5	-	-	-	-	4	-	-	-	-
	7	4	5	5	6	3	2	-	5	5	-	-	-
	8	4	6	4	-	-	-	-	-	-	-	-	-
	9	4	5	5	4	5	4	-	4	-	-	-	-
	10	3	6	5	7	6	7	-	5	5	-	-	-
	11	-	-	-	-	-	-	-	3	5	-	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-
	13	4	5	5	5	5	-	4.5	-	2	4	5	5
Mean(\bar{x})													
(5.71) (3.41) (4.75) (3.00) (4.50) (5.00) (4.39)													
#51 ID 185	1	6	6	5	5	5	5	-	5	5	5	5	5.5
	2	-	-	-	-	-	-	-	-	-	-	-	-
	3	6	7	4	4	-	6	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-
	5	4	6	6	5	4	4	-	5	-	-	-	-
	6	4	6	5	-	-	-	-	-	-	-	-	-
	7	4	6	5	4	5	5	-	5	5	-	-	-
	8	4	6	4	-	-	-	-	4	-	-	-	-
	9	4	6	5	5	5	4	-	5	6	-	-	-
	10	4	8	5	3	6	7	-	5	5	-	-	-
	11	-	-	-	-	-	-	-	5	5	-	9*	-
	12	-	-	-	-	-	-	-	-	-	-	-	-
	13	5	6	5	5	5	-	4	-	2	5.5	5	5.5
Mean(\bar{x})													
(4.42) (4.16) (5.00) (3.75) (5.50) (6.33) (4.86)													

^{1/} Average Water Absorption, Viscosity, Cookie Diameter, Pancake, Udon Noodle, and Sponge Cake.

* High Ratio White Layer

Code and Sample No.	Collab. No.	Flr. Prot.	Flr. Ash	Flr. Moist.	Farinograph Abs. Peak	Stab. Val.	Bake Abs. Time	Mix Toler.	Oxida. Req.	Loaf Vol.	KBrO ₃ Resp.	Crumb Color	Grain & Txtr.	Overall Rating
#52 Borah CI017267	-	-	-	-	-	-	CHECK	SAMPLE	-	-	-	-	-	5.00
#53 ID 167	Mean(\bar{x})	5	5	5	4	6	5	4	7	-	5	4	5	6
	1	5	5	5	4	6	5	4	7	-	5	4	5	6
	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	5	4	6	-	-	1	3	4	-	1	1	1	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	5	5	5	4	5	4	5	6	5	5	6	6	-
	7	5	4	5	5	7	5	5	5	5	6	6	6	5.5
	8	6	6	5	7	6	5	7	5	6	7	6	7	6
	9	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	5	5	3	8	7	3	8	-	-	7	7	5	-
	11	-	-	-	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	5	5	5	6	-	4	6	5	6.5	5	5	6	6
	Mean(\bar{x})	5	5	5	6	-	4	5	5	(5.35)	5	(5.00)	(5.14)	(5.15)
#54 WA 6510	Mean(\bar{x})	3	3	5	5	6	5	5	6	-	3	4	2	3
	1	3	3	5	5	6	5	5	6	-	3	4	2	3
	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	3	1	7	-	-	6	5	7	-	4	5	5	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	4	4	5	3	5	6	-	-	-	-	-	-	-
	6	3	3	5	5	5	4	5	6	-	4	5	6	-
	7	3	3	5	6	7	2	5	5	5	7	5	5	4.75
	8	3	4	6	7	6	3	7	4	6	1	5	4	3
	9	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	2	3	6	5	4	3	6	-	-	3	5	5	-
	11	-	-	-	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	4	4	5	4.5	5.5	4	6	5	-	5	5	5	5
	Mean(\bar{x})	4	4	5	4.5	5.5	4	5	5	(3.33)	5	(4.85)	(4.57)	(4.60)
#55 WA 6750	Mean(\bar{x})	3	4	5	5	6	4	5	6	-	3	6	3	3
	1	3	4	5	5	6	4	5	6	-	3	6	3	3
	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	1	3	9	-	-	4	4	5	-	3	6	5	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	4	5	4	5	6	6	-	-	-	-	-	-	-
	6	3	4	5	5	5	6	5	5	5	3	6	6	-
	7	3	4	5	5	7	3	5	5	5	6	7	6	5.2
	8	1	4	6	7	6	4	7	6	6	3	6	4	3
	9	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	2	4	5	6	7	3	7	-	-	3	6	5	-
	11	-	-	-	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	3.5	5	5	5.5	-	5	6	5	5.5	5	5	5	4.8
	Mean(\bar{x})	3.5	5	5	5.5	-	5	6	5	(3.78)	5	(6.00)	(4.85)	(4.92)
1/ Average Mixing Time and Tolerance, Water Absorption, Loaf Volume, Crumb Color, and Grain Texture.														

INDIVIDUAL COLLABORATORS' RATING
(HRW)

Code and Sample No.	Collab. No.	Flr. Prot.	Flr. Ash	Flr. Moist.	Flr. Farinograph Abs.	Peak Stab.	Bake Mix Val.	Mix Toler.	Oxida. Req.	Loaf KBrO ₃ Vol.	Crumb Color & Txtr.	Grain Rating	Overall Baking Rating
#56 Wanser	-	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	-	5.00
Mean(\bar{x})													
#57 77-99	1	6	5	5	5	5	5	5	4	5	6	4	6
	2	-	-	-	-	-	-	-	-	-	-	-	-
	3	9	5	6	-	-	6	6	-	7	6	5	-
	4	-	-	-	-	-	-	-	-	-	-	-	-
	5	5	5	5	4	4	-	-	-	-	-	-	-
	6	6	5	5	5	5	6	5	6	5	5	6	-
	7	7	5	5	5	5	5	-	5	7	5	5	5.3
	8	7	5	5	6	5	6	5	7	5	6	3	3
	9	-	-	-	-	-	-	-	-	-	-	-	-
	10	8	5	5	4	3	-	5	-	5	5	5	-
	11	-	-	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-
	13	6	5	5	5	4	-	5	5	4	5	5	4.5
Mean(\bar{x}) (5.00)													
(5.16) (5.50) (5.42) (4.71) (5.20)													

1/ Average Mixing Time and Tolerance, Water Absorption, Loaf Volume, Crumb Color, and Grain Texture.

INDIVIDUAL COLLABORATORS' RATING
(SWS)

Code and Sample No.	Collab. No.	Flr. Prot.	Flr. Ash	Flr. Moist.	Flr. Farinograph Abs.	Peak Stab.	Mac. Visc. Dia.	Cookie Spread Factor	Pancake Noodle	Udon Cake	Sponge Cake	Overall Rating	Overall Baking Rating
#58 Dirkwin	-	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	-	5.00
Mean(\bar{x})													
#59 WA 6753	1	6	5	5	5	5	-	5	6	-	3	4	4
	2	-	-	-	-	-	-	-	-	-	-	-	-
	3	7	4	5	6	-	5	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-
	5	4	4	5	5	4	5	6	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-	-	-	-
	7	4	5	5	5	5	-	3	5	5	-	-	-
	8	-	-	-	-	-	-	-	-	-	-	-	-
	9	4	5	5	5	5	4	5	4	5	6	-	-
	10	3	4	5	7	6	-	-	-	-	-	-	-
	11	-	-	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-
	13	5	5	5	5	5	-	4	5	6	5	5	5
Mean(\bar{x}) (5.42) (4.30) (5.00) (5.75) (4.50) (4.50) (4.91)													

1/ Average Water Absorption, Viscosity, Cookie Diameter, Pancake, Udon Noodle, and Sponge Cake.

MEAN OF COLLABORATORS' RATING
SOFT WHEATS

Sample No.	Variety or Selection	Absorption		Viscosity		Cookie Diameter		Pancake		Udon Noodle		Sponge Cake		Average Overall Rating
		\bar{X}	Range	\bar{X}	Range	\bar{X}	Range	\bar{X}	Range	\bar{X}	Range	\bar{X}	Range	
SWS														
42	Nugaines	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	-	-	5.00
43	77-294	5.33	5-6	4.00	3-5	4.78	4-5	3.00	3-3	5.00	5-5	4.16	3-5	4.39
44	ID 5318	5.50	5-6	4.16	3-5	4.37	3-5	2.50	2-3	5.50	5-6	3.66	3-4	4.28
45	WA 6363	3.75	3-5	5.50	4-8	6.68	5-9	6.00	6-6	5.50	5-6	5.00	5-5	5.41
CLUB														
46	Paha	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	-	-	5.00
47	Jacmar	4.71	3-5	4.08	4-4.5	5.00	4-6	5.00	4.5-5.5	4.50	4-5	5.00	5-5	4.71
48	WA 6472	4.85	4-5	4.41	3-5	4.87	4-6	4.25	3-4.5	5.00	5-5	4.50	3-5.5	4.64
SWS														
49	Fielder	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	-	-	5.00
50	WA 6402	5.71	4-7	3.41	2-4	4.75	4-5	3.00	2-4	4.50	3-6	5.00	5-5	4.39
51	ID 185	4.42	3-5	4.16	3-5	5.00	5-5	3.75	2-5.5	5.50	5-6	6.33	5-9	4.86
58	Dirkwin	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	-	-	5.00
59	WA 6753	5.42	5-7	4.30	3-6	5.00	5-5	5.75	4.5-7	4.50	3-6	4.50	4-5	4.91

1/ Average of all factors, with equal weight of importance to each.

MEAN OF COLLABORATORS' RATING
HARD WHEATS

Sample No.	Variety or Selection	Absorption		Mixing Time		Mixing Tolerance		Loaf Volume		Crumb Color		Grain & Texture		Average ^{1/} Overall Rating
		\bar{X}	Range	\bar{X}	Range	\bar{X}	Range	\bar{X}	Range	\bar{X}	Range	\bar{X}	Range	
<u>HRS</u>														
52	Borah	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	-	-	5.00
53	ID 167	4.66	3-5	5.42	3-8	5.33	4-7	5.35	1-7	5.00	1-7	5.14	1-7	5.15
54	WA 6510	3.78	3-5	5.57	5-7	5.50	4-7	3.33	1-5	4.85	4-5	4.57	2-6	4.60
55	WA 6750	4.00	3-5	5.57	4-7	5.33	5-6	3.78	3-6	6.00	5-7	4.85	3-6	4.92
<u>HRW</u>														
56	Wanser	-	-	-	-	-	CHECK SAMPLE	-	-	-	-	-	-	5.00
57	77-99	5.00	4-6	5.16	5-6	5.50	4.7	5.42	4-7	5.42	5-6	4.71	3-6	5.20

BRIEF COMMENTS RECEIVED

- #42 - Nugaines (Check)
 - Abnormal amount of thin and shrivelled kernels.
 - Flat extensogram.
 - Gave good noodle with somewhat weak masticating feeling.
 - Cake and cookie baking quality was normal.
- #43 - 77-294
 - Medium sized kernels.
 - Good flour color.
 - Noodle quality was slightly inferior to #42.
 - More or less unsatisfactory cracks in the top of cookies.
- #44 - ID 5318
 - Large plump kernels.
 - Good flour color in spite of high flour ash.
 - Well balanced extensograph.
 - Good noodle making quality.
 - Relatively poor cake and cookie baking quality.
- #45 - WA 6363
 - Relatively large kernels.
 - Good milling quality.
 - Very low protein and ash and good flour color.
 - Cake and cookie baking quality was very good.
 - Gave noodle with poor masticatory feeling in spite of good color.
 - Very low water absorption.

SWW Wheat Ranking: 44 > 45 > 42 > 43 for noodle.
 45 > 42 > 43 > 44 for cake and cookie.
 46 > 42 > 43 > 44 pancake quality.

- #46 - Paha (Check)
 - Plump kernel with good luster.
 - Very good milling quality.
 - Low flour ash and good flour color.
 - Very flat and low extensogram.
 - Very good cake baking quality.
 - Relatively good cracks on the top of cookie.
- #47 - Jacmar
 - Plump kernels with good luster.
 - Good milling quality.
 - Good flour color.
 - Flat extensogram (not as flat as #46)
 - Cake baking quality was slightly inferior to #46.
 - Large cookie spread but poor top grain.
 - Flour character was a little stronger than #46.

- #48 - WA 6472
- Very low wheat and flour ash.
 - Very good flour color.
 - Good cake and cookie baking quality.
 - Weaker than #47 and similar to #46 in flour weakness.

White Club Wheat Ranking: 46 > 48 > 47

Sample preference: Sample #48 would be preferred over #46 for our cookie production. Sample #47 would be less desirable than #46.

Control #46 did not perform well as cake baking standard.

46 > 47 > 48 for pancake making

- #49 - Fielder (Check)
- Small kernel and dull luster.
 - Good milling quality.
 - High amylograph viscosity.
 - Gave excellent noodle but noodle color was unsatisfactory.
 - Cake and cookie baking quality was poor.
- #50 - WA 6402
- Semi-glossy and long kernels.
 - Relatively high in protein.
 - Good flour color.
 - Cake baking quality was good but cookie baking was poor.
 - Noodle had very poor masticatory feel.
- #51 - ID 185
- Long kernel with dull luster.
 - Good noodle making quality.
 - Relatively good for cake and very good for cookie.
- #58 - Dirkwin (Check for #59)
- High flour ash.
 - Flat extensogram.
 - Good for noodle.
 - Unsuitable for cake and cookie.
- #59 - WA 6753
- Very high flour ash.
 - High protein.
 - Noodle making quality was inferior to #58 in flavor and eating quality.

SWS Wheat Ranking: 51 > 49 > 50 58 > 59.

Control #49 not a good cake baking control.

#50 and #51 are inferior flours for pancake making.

#59 is excellent for pancake making.

- #52 - Borah (Check)
- Large kernel with dim luster.
 - Very high protein wheat.
 - Low grain ash and flour ash (for spring wheat).
 - Good milling quality.
 - Flour color was not good.
 - Gave most acceptable bread among HRS wheats, namely, large loaf volume and good eating quality.
- #53 - ID 167
- Dark brown colored large grain with dim luster.
 - Very high protein with normal ash.
 - Good milling quality but flour color was dark.
 - Long peak time and good stability in farinograph.
 - Long mixing time.
 - Bread dough slacked in proofing stage.
 - Grayish crumb color.
 - Baking quality was slightly inferior to #52.
- #54 - WA 6510
- Yellowish brown medium-sized kernel with poor luster.
 - Good milling quality.
 - Gave poor bread; small oven spring, poor crumb grain and texture, inferior flavor and eating quality.
- #55 - WA 6750
- Yellowish brown large size kernels.
 - Low ash and relatively low protein.
 - Good milling quality.
 - Gave rather good bread in spite of low protein.

HRS Wheat Ranking: 52 > 53 > 55 > 54 53 > 52
 #54 and #55 less desirable than #52.

- #56 - Wanser (Check)
- Dark flour color.
 - Gave poor bread.
- #57 - 77-99
- Light brown color and long thin kernels with dull luster.
 - High ash flour and dark color flour.
 - Low mixing tolerance.
 - Inferior dough handling characteristics.
 - Gave nice bread with good eating quality.
 - Large oven spring.
 - Baking quality better than #56.

HRW Wheat Ranking: 57 > 56
 #57 less desirable than #56.

